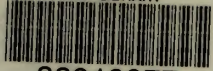
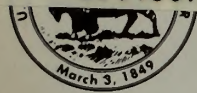


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January 1990



SLEEPING GIANT AND SHEEP CREEK WILDERNESS STUDY/ENVIRONMENTAL IMPACT STATEMENT

DRAFT



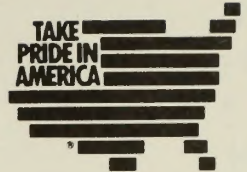
As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interests of all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. administration.

BLM-MT-ES-90-002-4332



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
MONTANA STATE OFFICE
222 NORTH 32ND STREET
P.O. BOX 36800
BILLINGS, MONTANA 59107-6800



IN REPLY TO:

Dear Reader:

The Sleeping Giant and Sheep Creek Wilderness Draft Environmental Impact Statement is presented for your review and comment. This document evaluates the environmental effects of two alternative classifications — an All Wilderness designation and a No Wilderness designation. The proposed action recommends that the two WSAs not be designated wilderness and that the combined areas be managed under the existing Area of Critical Environmental Concern Management Plan of December 1988. Issues and scoping information are presented in Chapter 1, alternatives are described in Chapter 2, and the effects of the alternatives on the appropriate issues are disclosed in Chapter 4.

The two WSAs lie adjacent to one another and are separated by a powerline and a maintenance road. They are located near Holter Lake in west-central Montana some 30 miles north of the capital city of Helena.

Written comments will be accepted through May 9, 1990. Your input will be incorporated into the final environmental impact statement. All comments should be sent to Brad Rixford, Project Manager, Butte District Office, BLM, P.O. Box 3388, Butte, Montana 59702.

A formal hearing for public comments is scheduled at the Jorgenson's Motel, 1714 11th Avenue in Helena, Montana, on May 9, at 7:00-9:00 p.m.

Sincerely yours,

State Director

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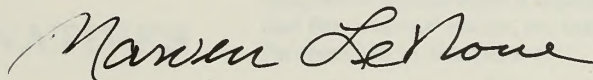
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SLEEPING GIANT AND SHEEP CREEK WILDERNESS STUDY/ENVIRONMENTAL IMPACT IMPACT

Butte District Office
Bureau of Land Management
Department of the Interior

January 1990



State Director
Montana State Office

ABSTRACT

U.S. DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

DRAFT

October 1989

SLEEPING GIANT AND SHEEP CREEK WILDERNESS STUDY

ENVIRONMENTAL IMPACT STATEMENT

The wilderness environmental impact statement evaluates the suitability of the 6,487-acre Sleeping Giant WSA and the 3,927-acre Sheep Creek WSA for designation as wilderness. These WSAs are located near Holter Lake in Lewis and Clark County, west-central Montana. The capital city of Helena is approximately 30 miles south; while Great Falls is some 60 miles northeast.

This wilderness study/EIS recommends that the two WSAs not be designated as wilderness. The proposed action is to continue managing these areas in accordance with the Area of Critical Environmental Concern Plan of December 1988.

For further information contact Brad Rixford, Project Manager, Butte District Office, Bureau of Land Management, P.O. Box 3388, Butte, Montana 59702 or phone (406) 494-5059.

SUMMARY

INTRODUCTION

This wilderness study and Environmental Impact Statement (EIS) is prepared in compliance with Sections 603 and 202 of the Federal Land Policy and Management Act of 1976 (FLPMA). Its purpose is to analyze the suitability or unsuitability of two wilderness study areas (WSAs) for designation as wilderness, in accordance with the guidelines in the Wilderness Act of 1964.

The two WSAs analyzed in this document are Sleeping Giant (6,487 acres) and Sheep Creek (3,927 acres). Sleeping Giant is being reviewed under the authority of Section 603 of FLPMA while Sheep Creek is being reviewed under Section 202 of the same act. Although the study guidance is similar, reporting procedures vary under the two sections of the act.

SETTING

The Sleeping Giant and Sheep Creek study areas are located near Holter Lake in Lewis and Clark County, west-central Montana. The capital city of Helena is approximately 30 miles south while Great Falls is some 60 miles northeast. The two wilderness study areas are adjacent to one another and are separated by a powerline and an associated maintenance road.

STUDY RECOMMENDATIONS

The proposed action is a No Wilderness recommendation for both the Sleeping Giant and Sheep Creek WSAs. As a result, the two WSAs would continue to be managed as an Area of Critical Environmental Concern (ACEC). Management of this administratively designated area would be consistent with the final Headwaters Resource Management Plan (RMP) and the Sleeping Giant ACEC management plan. Guidance governing activities within the ACEC is very similar to wilderness in that the management objectives are oriented toward protection and enhancement. Mitigating measures to prevent undue and unnecessary environmental degradation will be applied to future authorized actions through the environmental analysis process.

ISSUES AND ALTERNATIVES

During the scoping phase of this study, a number of issues and alternatives were nominated for consideration by the public and the BLM interdisciplinary team to guide the selection of the proposed action. These preliminary issues and alternatives were then examined for significance and relevancy. The vast majority of nominated issues were eliminated from detailed analysis due to the similarities in management strategies between the finalized alternatives

(ACEC management verses wilderness designation). Resources that were not significantly affected or changed by the alternatives were eliminated. Rationale for not providing detailed analysis of certain issues and alternatives is presented in Chapter 1. Issues carried forward for detailed evaluation include impacts on wilderness values and impacts on mining decorative stone for the Sleeping Giant WSA, and impacts on wilderness values for the Sheep Creek WSA.

Alternatives analyzed specific to each WSA are No Wilderness (proposed action) and All Wilderness.

Sleeping Giant

No Wilderness (Proposed Action)

The entire WSA (6,487 acres) is recommended as unsuitable for wilderness designation. Nondesignation of the WSA (continuation of ACEC management) would not significantly degrade the wilderness values of naturalness, solitude, primitive recreation, or supplemental features.

The 25-acre area of commercial decorative slate within the WSA would probably be excavated at a rate of about 25 tons per year. Over a 20-year period, surface disturbance would equal about 1/10 of an acre. This excavation would not create any new road construction. All activities would be subject to unnecessary and undue degradation regulations, an approved plan of operations, and adequate bonding for reclamation.

All Wilderness

Designation of the entire WSA (6,487 acres) would ensure long-term protection for the wilderness values of naturalness, solitude, primitive recreation, and supplemental features. Decorative slate mining within the WSA would be closed and all future excavation activities would occur off-site.

Sheep Creek

No Wilderness (Proposed Action)

The entire WSA is recommended as unsuitable for wilderness designation. The continuation of ACEC management would emphasize resource protection. Given the use restrictions placed on potential surface-disturbing activities, coupled with the area's inaccessible terrain and low potential for mineral entry, no impairment of natural values is foreseeable in the future.

All Wilderness

Designation of the entire WSA (3,927 acres) would ensure long-term preservation of all wilderness values. This designation would not significantly affect any present or future pending activities within the area.

TABLE OF CONTENTS

CHAPTER 1, INTRODUCTION		
Purpose and Need for the Action	1	
Setting	1	
Background	1	
Overview of the Wilderness Review Process	6	
Development of Planning Criteria and Quality Standards	7	
Relationship of this Wilderness EIS to the Headwaters RMP/EIS	7	
Scoping for the Two WSAs Included in this Document	8	
CHAPTER 2, DESCRIPTION OF ALTERNATIVES INCLUDING THE PROPOSED ACTION		
Introduction	11	
Alternative Management Descriptions Common to Both WSAs by Resource	11	
Summary of Impacts	15	
CHAPTER 3, AFFECTED ENVIRONMENT		
Introduction	17	
Issue Related Resources of the WSAs	17	
CHAPTER 4, ENVIRONMENTAL CONSEQUENCES		
Introduction	25	
Alternative Analysis by WSA	25	
CHAPTER 5, CONSULTATION, COORDINATION, & PUBLIC INVOLVEMENT		
Issue Identification	27	
Consultation and Coordination	27	
Distribution	27	
List of Preparers	29	
Document Production Team	30	
APPENDIXES		
APPENDIX A: Public Comment on the Issue Brochure	31	
APPENDIX B: Sleeping Giant ACEC Management Plan	35	
APPENDIX C: Wilderness Inventories	47	
APPENDIX D: Additional Wilderness Factors Considered	71	
GLOSSARY		83
REFERENCES		85

LIST OF MAPS

CHAPTER 1	
Regional Map	2
Special Designation Map	3
WSAs Location Map	4
Mineral Ownership Map	5
CHAPTER 2	
Sleeping Giant WSA Alternatives Map	12
Sheep Creek	13
CHAPTER 3	
Sleeping Giant WSA Status Map	18
Sleeping Giant WSA Topographic Map	19
WSAs Existing Impacts Map	20
Sheep Creek WSA Status Map	23
Sheep Creek WSA Topographic Map	24
APPENDIXES	
Sleeping Giant ACEC Map	46
Sleeping Giant Inventory Map	54
Jackson Peak Add-on Inventory Map	61
Sheep Creek Inventory Map	69

LIST OF TABLES

CHAPTER 1	
1-1 Private Minerals Ownership by WSA	6
CHAPTER 2	
2-1 Comparative Summary of Impacts for Sleeping Giant WSA	15
2-2 Comparative Summary of Impacts for Sheep Creek WSA	16
CHAPTER 3	
3-1 Sleeping Giant WSA; Effects on Naturalness	21
CHAPTER 5	
5-1 Public Involvement	28
5-2 Document Production Team	30
APPENDIX A	
A-1 Summary of Issue Related Responses	32
APPENDIX D	
D-1 Ecosystems Acres by WSA	72
D-2 Proximity of Wilderness to Population Centers	72
D-3 Wilderness Recommendations Transmitted by this Report	72
D-4 Completed Montana BLM Wilderness Studies Awaiting Presidential Recommendations	73
D-5 Montana Statutory Wilderness (All Agencies)	75
D-6 Montana Wilderness Recommendations Pending before Congress (All Agencies)	77
D-7 Other Agency Areas in Montana under Wilderness Study or with Preliminary Recommendations	77
D-8 Regional Wilderness Opportunities	81

CHAPTER 1

INTRODUCTION

PURPOSE AND NEED FOR THE ACTION

The purpose of this Environmental Impact Statement (EIS) is to document the environmental effects and consequences that are likely to occur under two alternatives for the Sleeping Giant and Sheep Creek Wilderness Study Areas (WSAs). The EIS analyzes the effects of either designating each WSA as a component of the National Wilderness Preservation System (under provisions of the Wilderness Act of 1964 and the BLM Wilderness Management Policy Document of 1981), or of recommending against such designation and managing both of the WSAs as an area of critical environmental concern (ACEC) as established through the Headwaters Resource Management Plan of 1984. Management in the latter case would be in accordance with the Sleeping Giant ACEC Management Plan of 1988.

Pursuant to the Wilderness Act and FLPMA, only Congress can ultimately decide which areas, if any, will be designated wilderness and added to the National Wilderness Preservation System (NWPS). Section 102(c) of the National Environmental Policy Act (NEPA) requires that "major federal actions which would significantly affect the human environment" be analyzed and documented in an environmental impact statement. BLM policy is that an EIS will be prepared for all wilderness study recommendations.

The Sleeping Giant WSA has been analyzed under the authority of Section 603 of FLPMA. Direction under this section requires that a final wilderness or nonwilderness decision be made by Congress.

The Sheep Creek WSA has been analyzed under the authority of Section 202 of FLPMA. Direction under this section requires that a wilderness recommendation be finalized through congressional action while nonwilderness recommendations need only be approved by BLM.

Procedures and format for documenting the analysis of the two WSAs are identical. The EIS fulfills the requirements of the National Environmental Protection Act, FLPMA, BLM planning regulations (43 CFR 1601), and the BLM Wilderness Study Policy.

SETTING

The two WSAs are located near Holter Lake in Lewis and Clark County, west central Montana. The city of Helena is approximately 30 miles to the south; Great Falls is some 60 miles northeast. See the Regional Map.

Both WSAs lie within the Sleeping Giant ACEC, which totals some 11,609 acres of public land. Management of the ACEC emphasizes the protection and enhancement of its primitive recreation, scenic and wildlife values.

Other special designation areas along the Missouri River near these BLM study areas include the Beartooth Game Range and the Gates-of-the-Mountains Game Preserve (both administered by the Montana Department of Fish, Wildlife and Parks); and the Gates of the Mountains Wilderness Area and the adjoining Big Log Roadless Area (both administered by the U.S. Forest Service). See the Special Designation Map.

Holter Lake and the Missouri River are directly east of the Sleeping Giant WSA. This water body is extremely popular for a wide variety of public recreation activities. Visitors commonly use the lake and shoreline for boating, fishing, water skiing, swimming, photography, nature study, picnicking and overnight camping. Developments along the shoreline in the vicinity of the Sleeping Giant WSA include two developed recreation areas, two marinas, two lodges, several trailer parks, and numerous summer homes.

The Sleeping Giant and Sheep Creek WSAs are separated by a powerline and an associated maintenance road. This powerline has a 40-foot right-of-way and is owned and managed by the Montana Power Company (MPC). See the Sleeping Giant and Sheep Creek WSAs Location Map.

Public access to these WSAs is by boat from Holter Lake or by vehicle via the Wood Siding Gulch Road which terminates on public land west of the Sheep Creek WSA boundary.

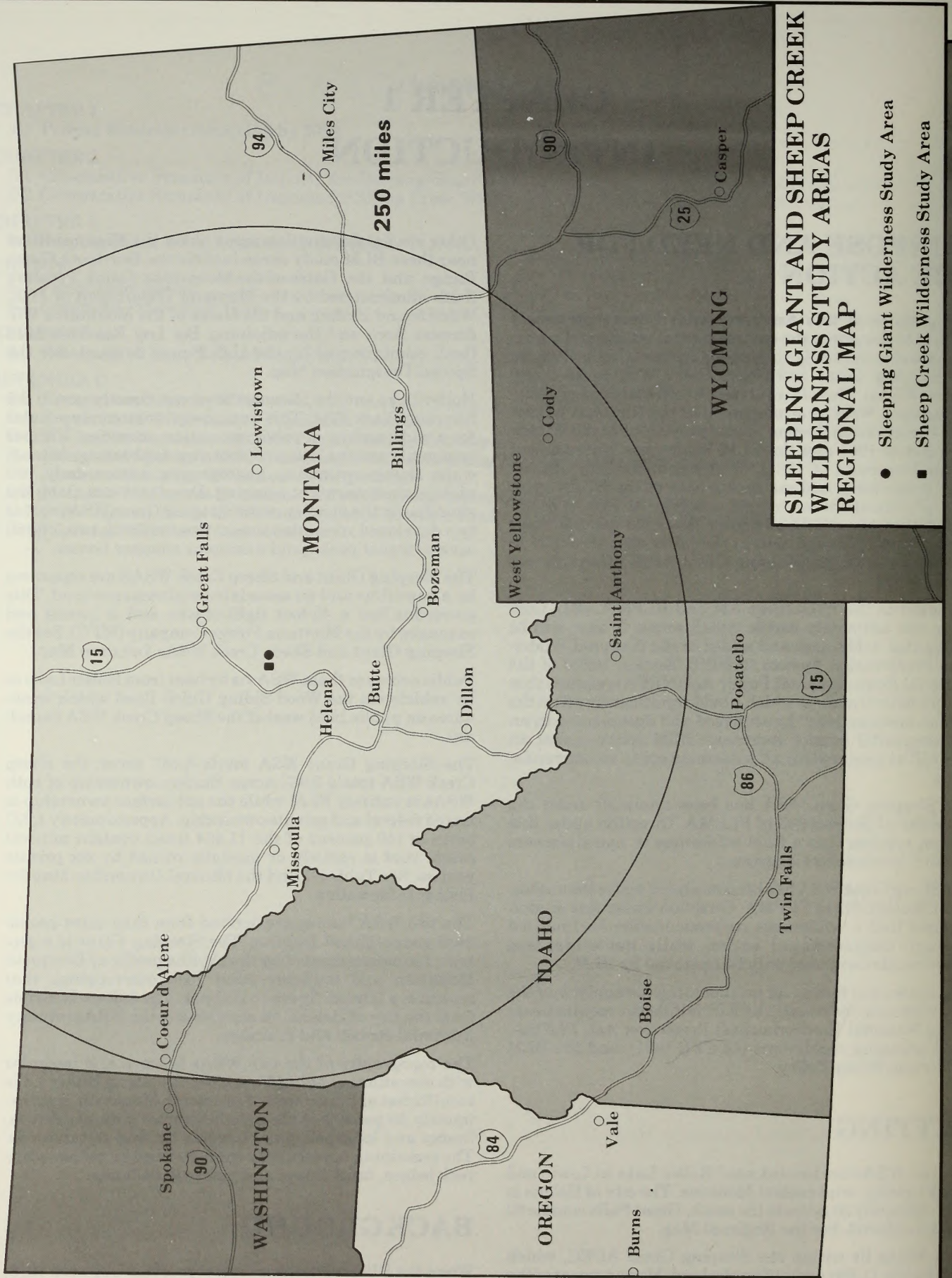
The Sleeping Giant WSA totals 6,487 acres; the Sheep Creek WSA totals 3,967 acres. Surface ownership of both WSAs is entirely BLM while the subsurface ownership is mixed federal and private ownership. Approximately 4,327 acres or (40 percent of the 11,454 total) contain mineral estate that is entirely or partially owned by six private parties. See Table 1-1 and the Mineral Ownership Map for further information.

The two WSA names are derived from their most prominent geographical features. The Sleeping Giant is a geologic formation created by the skyline profile of Beartooth Mountain and lower-elevation rock outcroppings that resemble a human figure on its back. The feature is visible from the city of Helena. Sheep Creek is the WSAs primary perennial stream and drainage.

The topography of the two WSAs is steep and irregular with elevations ranging from 3,600 feet along Holter Lake to 6,792 feet at the summit of Beartooth Mountain. Approximately 50 percent of the area is forested with ponderosa, limber and lodgepole pine, Douglas fir, and cottonwoods. The remaining landscape is characterized by sedimentary rock ledges, talus slopes and native grasslands.

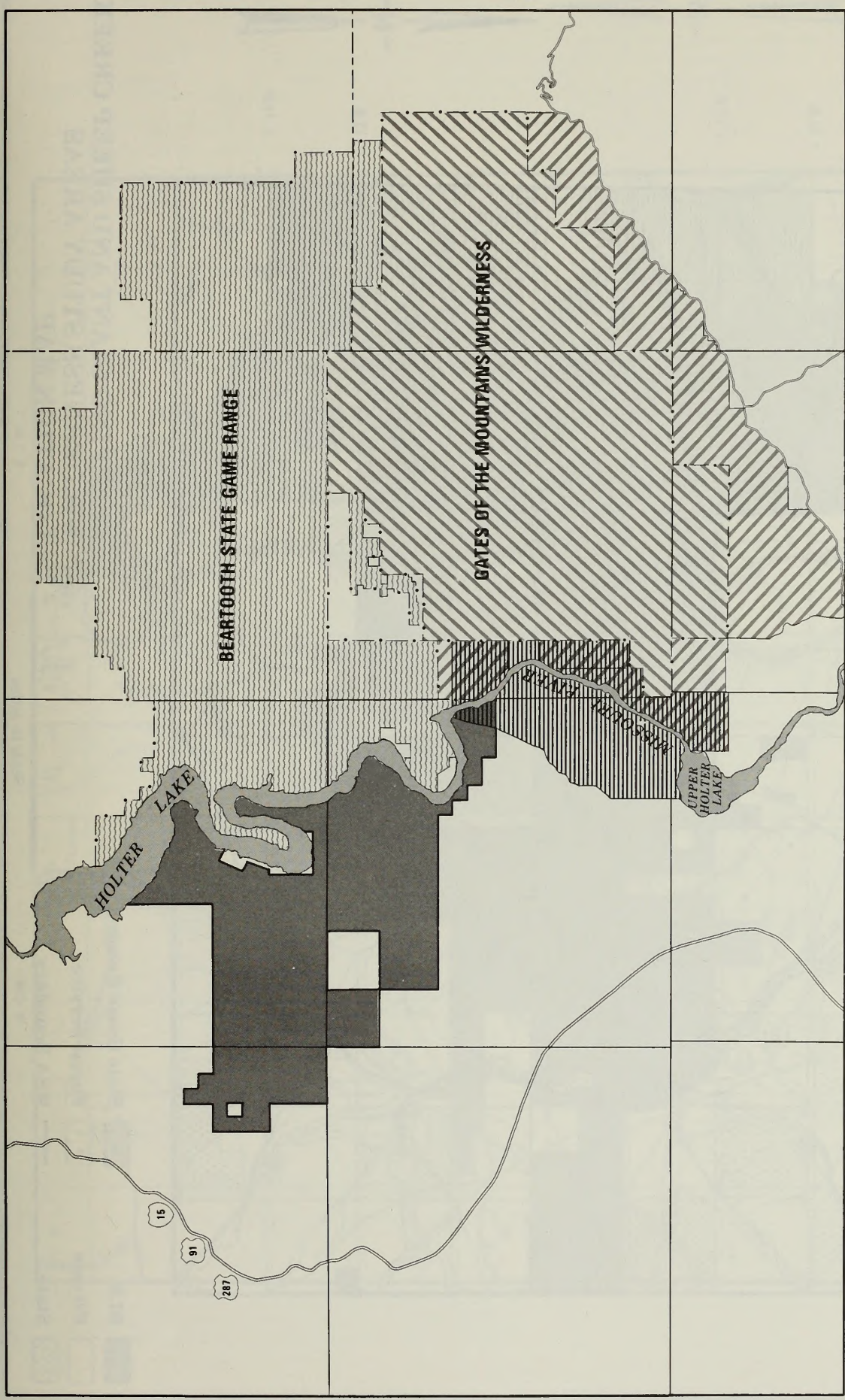
BACKGROUND

When the BLM wilderness review program began in 1978, public lands in the Sleeping Giant area totaled about 6,800 acres of noncontiguous parcels interspersed with private



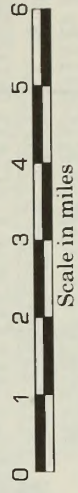
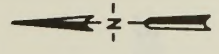
R. 4 W. R. 3 W. R. 2 W. R. 1 W.

T. 14 N. T. 13 N. T. 12 N.



- Sleeping Giant Area of Critical Environmental Concern (BLM)
- Beartooth Game Range (State)
- Gates-of-the-Mountains Wilderness Area (USFS)
- Big Log Roadless Area (USFS)
- Gates-of-the-Mountains Game Preserve (State)

SPECIAL DESIGNATION MAP

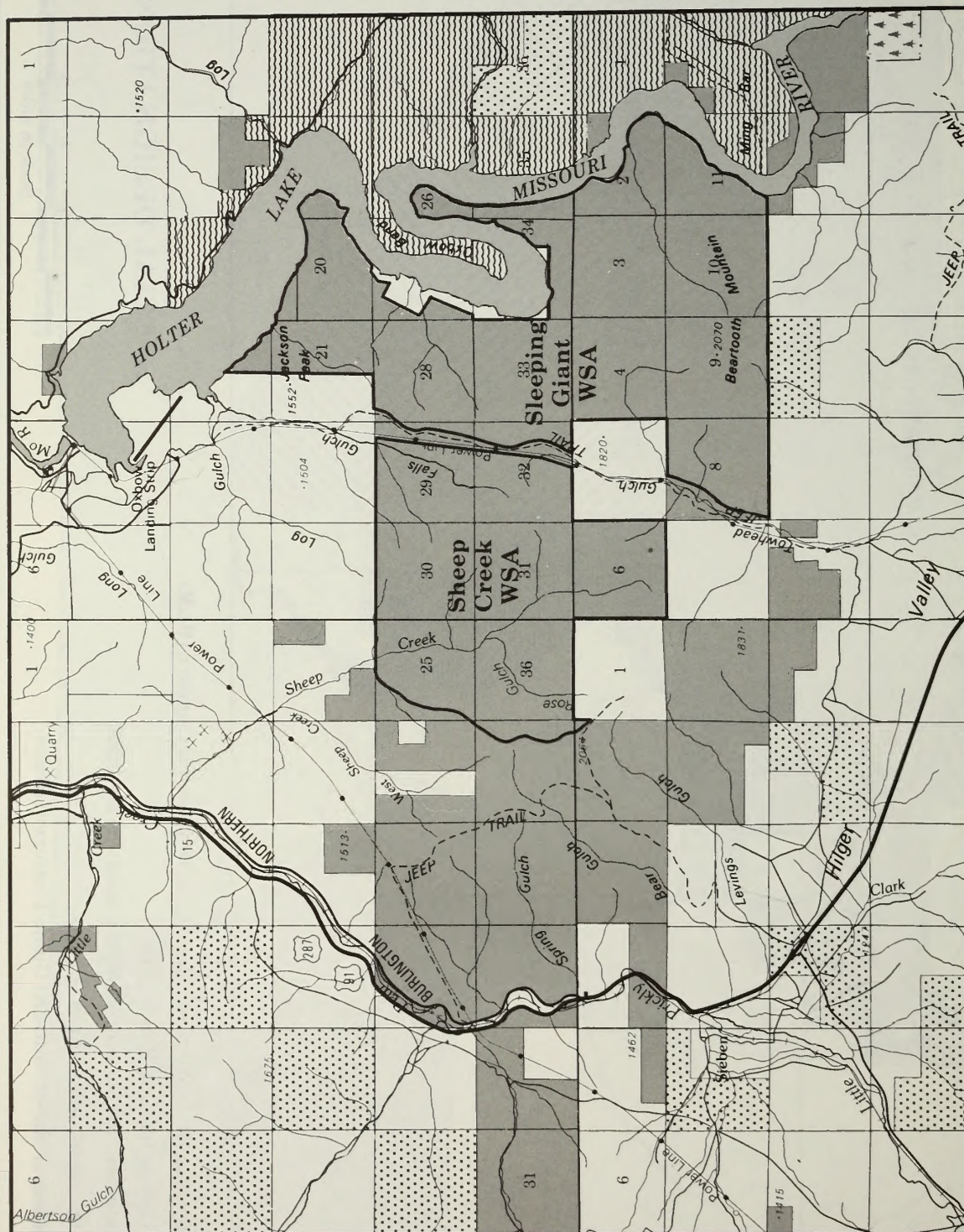
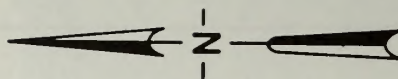


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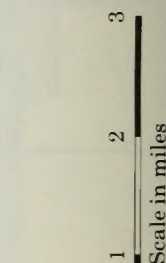
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SLEEPING GIANT AND SHEEP CREEK WILDERNESS STUDY AREAS LOCATION MAP



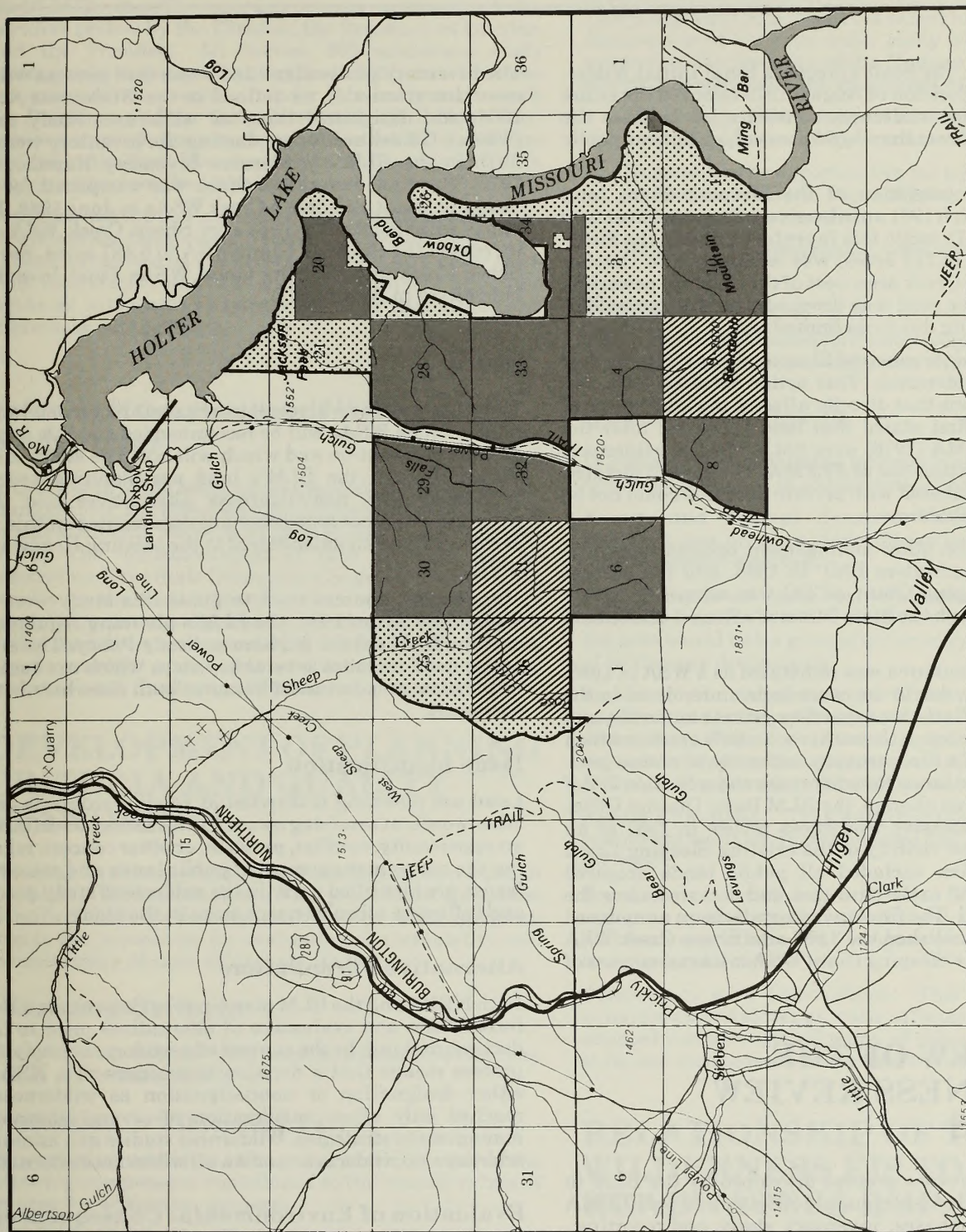
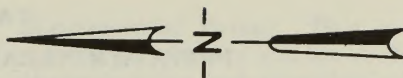
- BLM
- Private
- State
- State Game Range
- Forest Service
- WSA Boundary

R. 3 W.

R. 4 W.

T. 14 N.

T. 13 N.



Sleeping Giant and Sheep Creek WSA Boundaries

BLM — All Minerals

Private — All Minerals

Private — Oil and Gas Only

SLEEPING GIANT AND SHEEP CREEK WILDERNESS STUDY AREAS MINERAL OWNERSHIP MAP

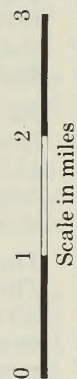


TABLE 1-1
PRIVATE MINERALS OWNERSHIP BY WSA

WSA Name	Private Acreage All Minerals	Private Acreage Oil & Gas Only	Total Private Acreage	Total Private Percentage
Sleeping Giant	1967	640	2,607	40
Sheep Creek	470	1,250	1,720	43

and state lands. The State Director's Final Initial Wilderness Inventory decision of August 1979 removed the entire area from further wilderness consideration because the area comprised fewer than 5,000 acres of contiguous public lands.

Following the completion of the Sleeping Giant land exchange in March 1981 an intensive wilderness inventory was conducted. Through this inventory process, the Sleeping Giant WSA (6,112 acres) was established in October 1981. The Sheep Creek area west of the dividing powerline and maintenance road was dropped from further wilderness consideration due to its limited size.

In 1982, the Director removed Sleeping Giant from further wilderness consideration. This action resulted from two solicitor's opinions that directly affected the land status of the WSA. The first stated that lands acquired after the passage of FLPMA (1976) were not subject to wilderness review under Section 603 of FLPMA. The second dictated that lands encumbered with private minerals could not be designated as wilderness.

As a consequence, other management options were analyzed in the Headwaters RMP in 1983, and the current 11,609-acre Sleeping Giant ACEC was administratively designated through the State Director's Record of Decision in July 1984.

The Sleeping Giant area was reinstated as a WSA in 1985. This change was due to the court decision rendered in the *Sierra Club vs. Watt* case regarding private minerals, and due to a modification of the earlier solicitor's opinion which recognized BLM's discretionary authority to review post-FLPMA acquired lands for wilderness under Section 202 of FLPMA. With this change, the BLM Butte District Office conducted an intensive wilderness review in 1987 of all BLM lands in the vicinity of the existing Sleeping Giant WSA. This review included all public lands acquired through four land exchanges that had occurred since the inventory of 1981. The final inventory decision announced in June 1988 established the 3,967-acre Sheep Creek WSA and increased the Sleeping Giant WSA to its current size of 6,487 acres.

OVERVIEW OF THE WILDERNESS REVIEW PROCESS

The wilderness review process developed by the BLM to carry out the wilderness mandate of Section 603 of FLPMA consists of three phases: inventory, study, and reporting.

Inventory

The inventory phase identified areas that possess wilderness characteristics, as defined in the Wilderness Act of 1964, and designated these as wilderness study areas (WSAs). Guidelines for conducting the inventory were set forth in the BLM's Wilderness Inventory Handbook of 1978. The final inventory phase was completed for the Sleeping Giant and Sheep Creek WSAs in June 1988. This phase established the 3,967-acre Sheep Creek WSA and increased the Sleeping Giant WSA to 6,487 acres. See the Sheep Creek and Sleeping Giant WSAs Final Inventory Narratives in Appendix B.

Study

The study process will result in a State Director determination of which WSAs will be recommended suitable for wilderness designation and which will not. The study is conducted through the BLM's land use planning process. Wilderness and nonwilderness alternatives and their environmental consequences are documented in this wilderness EIS as an amendment to the existing Headwaters RMP.

The primary sources used to guide this study were the Wilderness Act of 1964, the BLM's planning regulations, and the BLM's final Wilderness Study Policy. The study phase itself includes several key steps which are summarized below and discussed in more detail elsewhere in this document.

Issue Identification

Land use planning is directed at solving problems or, in other words, at resolving issues. An issue may be defined as an opportunity, conflict, problem, or other concern regarding the use or management of public lands and resources. Issues are identified early in the wilderness study process and influence all subsequent steps in the study.

Alternative Formulation

Both NEPA and the BLM planning regulations require the formulation and evaluation of alternatives prior to final decisionmaking. In the context of a wilderness study, this process means that a decision to recommend a WSA for either designation or nondesignation as wilderness is reached only after consideration of several alternative management strategies. Wilderness studies at a minimum address a no wilderness and an all wilderness alternative.

Evaluation of Environmental Consequences

The physical, biological, economic, and social effects of implementing each alternative are estimated in order to allow for a comparative evaluation of varying impacts.

The particular environmental parameters selected for detailed evaluation are based on appropriate issues identified for each WSA.

Reporting

The reporting phase begins when the BLM State Director forwards the preliminary wilderness recommendation to the BLM Director. The reporting process requires an administrative review by the Director, the Secretary of Interior, and the President. All Section 603 wilderness study recommendations as well as any Section 202 prowilderness recommendations rendered under this study must reach the President no later than October 21, 1991. Nonwilderness recommendations made under Section 202 studies are decided by the State Director. This wilderness study/EIS is scheduled to meet the 1991 deadline.

Congress has the sole authority to designate federal lands as wilderness. Congress will receive applicable recommendations submitted by the President along with other pertinent information and will either legislatively designate WSAs as wilderness or release them for uses other than wilderness management.

Interim Management of Wilderness Study Areas

In the case of WSAs being recommended for nonwilderness management, the proposed management direction may be inconsistent with the BLM Interim Management Policy for WSAs. The implementation of such direction will be deferred until the State Director or Congress, as applicable, decides on the final wilderness suitability recommendations. WSAs are managed under the Interim Management Policy guidelines so that existing wilderness characteristics documented at the time of the inventory phase are protected until final suitability decisions are made.

DEVELOPMENT OF PLANNING CRITERIA AND QUALITY STANDARDS

Planning criteria and quality standards were developed in the BLM's Wilderness Study Policy based on the issues identified both nationally and locally. This guidance directs the procedures for evaluating the suitability and nonsuitability of each wilderness study area.

Planning Criteria

The planning criteria were used to evaluate wilderness values and manageability.

Evaluation of Wilderness Values

This criterion considered the extent to which each of the following components contributed to the overall values of an area for wilderness purposes.

Mandatory Wilderness Characteristics. This component considered the quality of the area's naturalness, size, and outstanding opportunities for solitude or primitive recreation.

Supplemental Values. This component considered the presence or absence and the quality of optional wilderness characteristics such as ecological or geological features of scientific, educational, scenic, or historical value.

Multiple Resource Benefits. This component considered the benefits to other resources and uses that would be ensured by wilderness designation of the area.

Diversity in the National Wilderness Preservation System. This component considered the extent to which wilderness designation of the area under study would contribute to expanding the diversity of the National Wilderness Preservation System from the standpoint of three factors:

Expanding the diversity of natural systems and features, as represented by ecosystems and landforms.

Expanding the opportunities for solitude or primitive recreation within a day's driving time (5 hours) of major population centers.

Balancing the geographic distribution of wilderness.

Manageability

This criterion evaluated how effectively the area could be managed to preserve its wilderness character.

Quality Standards

In addition to the planning criteria, a set of quality standards was developed to ensure consistency:

Energy and Mineral Resource Values. This quality standard considered any identified or potential energy and mineral resource values.

Impacts on Other Resources. This quality standard considered the extent to which other resource values or uses of the area would be for gone or adversely affected as a result of wilderness designation.

Impact of Nondesignation on Wilderness Values. This quality standard considered the alternative use of the land under study if the area is not designated wilderness, and the extent to which the wilderness values of the area would be for gone or adversely affected as a result of this use.

Public Comment. This quality standard considered comments received from interested and affected parties at all levels.

Local, Social, and Economic Effects. This quality standard gave special attention to adverse or favorable social and economic effects that designation of the area would have on local areas.

Consistency with Other Plans. This quality standard considered consistency with officially approved and adopted resource-related plans of other federal agencies, state and local governments, and Indian tribes.

RELATIONSHIP OF THIS WILDERNESS EIS TO THE HEADWATERS RMP/EIS

The Headwaters RMP provides a comprehensive framework for managing and allocating public lands and issue-driven resources in the Headwaters Resource Area.

Although the Final RMP/EIS did not consider wilderness designation for the Sleeping Giant and Sheep Creek WSAs, it did administratively designate the area as an ACEC in 1984.

Since wilderness and the effects of designation were not considered in the current Headwaters RMP/EIS, this wilderness study document and its subsequent management decisions will serve to amend the RMP. This wilderness EIS will fulfill the regulation requirements for all aspects of the resource management planning process as specified in 43 CFR 1601 and in the BLM Planning Regulations Manual, Section 1600. These regulations specifically require that this amendment follow all the steps of the planning process listed in Section 1601.22 of the Manual. The planning steps:

- identification of issues,
- development of planning criteria,
- collection of inventory data,
- analysis of management situation (present resources and management),
- selection of alternatives,
- analysis of alternatives' impacts,
- selection of the preferred alternative (Draft EIS),
- selection of resource management plan (Final EIS),
- monitoring and evaluation.

SCOPING FOR THE TWO WSA'S INCLUDED IN THIS DOCUMENT

Scoping, when viewed in the context of NEPA, is the first step in the EIS process. During scoping, issues are identified, alternative management strategies are tentatively formulated, and other concerns pertinent to the environmental analysis are addressed. The results of scoping are continually modified and refined during the EIS process based on public review, interdisciplinary team analysis, and management involvement.

The two existing WSAs were established through the final intensive inventory in June of 1988, and shortly thereafter a Federal Register notice was issued announcing the beginning of the wilderness study. During this phase, the public was provided opportunities to comment through meetings, Federal Register notices and local press releases. Public comments were then reviewed and a BLM interdisciplinary team formulated a number of potential study issues and alternatives. These issues were presented in the Sleeping Giant and Sheep Creek Issue Scoping document and mailed to 170 organizations, businesses and individuals for comment in August 1988.

The issues addressed in the scoping document:

Wildlife
Recreation
Range
Cultural Resources
Wilderness
Minerals and Energy
Utility Corridors
Economics

Public comments on the issues brochure were used by an interdisciplinary team to refine the issues for analysis in the environmental impact statement. The identified issues

were then revised and evaluated for significant effects and relevancy. Issues that were unaffected or that did not change significantly under the varying management strategies were not carried forward for analysis.

The finalized list of issues documented in this EIS:

- | Sleeping Giant | Sheep Creek |
|---------------------------------------|---------------------------------|
| 1. Impacts on wilderness values | 1. Impacts on wilderness values |
| 2. Impacts on decorative stone mining | |

The following discussion summarizes the results of scoping for the WSAs analyzed in this EIS. See Chapter 5 and Appendix A for more information regarding the issue-identification process specific to this EIS.

Scoping Common to Both WSAs

The following results of scoping apply equally to both WSAs.

Issues That Do Not Require Detailed Analysis

Effects on Utility Powerline Management. A 100 kv powerline with a 40-foot right-of-way and maintenance road separates the two WSAs. The Montana Power Company manages this section of line under an existing right-of-way agreement with the BLM which is valid through the year 2018. The line transmits electricity generated at the Holter Lake Dam to East Helena and the Three Forks areas. The powerline extends south from the dam between the two WSAs for about four miles up Falls Gulch and down Towhead Gulch. See the WSAs Location Map.

The company's future management plan for this segment of powerline is to routinely maintain the existing facilities with no foreseeable changes regarding location, voltage capacity, or structure type. The use and maintenance needs of the company will be allowed to continue under the regulations of both the BLM and the Montana Major Facility Siting Act (Montana, DNRC 1985). This issue has been dropped from further consideration since no significant or varying effects on the management of the powerline, or on the wilderness resources for the WSAs alternatives, are analyzed in this EIS in the foreseeable future.

Effects on Oil and Gas. Potential for the occurrence of oil and gas within the WSAs is considered moderate due to their location in the Rocky Mountain Overthrust Belt. The likelihood of exploration activity or commercial development is considered low based on available geologic information. Both areas consist of steep, irregular terrain with limited opportunities for potential development sites. The WSAs currently contain one oil and gas lease on Federal lands totaling 1,711 acres. This lease expires on April 1, 1991.

Approximately 4,327 acres or 40 percent of each WSA is underlain by private oil and gas rights. Any exploration activities associated with these private holdings could occur subject to BLM restrictions on access, season of use, etc. in order to mitigate against unnecessary and undue degradation. Based on the low potential for development and the physiographic character of the area, there is little likelihood of any future activity. See the Minerals Ownership Map for an overview of private mineral rights.

Management strategies governing oil and gas exploration and development on all federal lands would be similar. Under the No Wilderness alternative (ACEC Management) no surface occupancy would be allowed; under the All Wilderness alternative no leases would be authorized. Given the low probability of oil and gas activity in the two WSAs, no significant actions are anticipated from oil and gas exploration and development under either alternative.

This issue, despite the private ownership of oil and gas rights, was dropped from further consideration due to the areas' physiographic characteristics and low potential for oil and gas activity.

Effects on Nonenergy Mineral Production. The U.S. Bureau of Mines open file report states that inferred reserves of 1.35 million tons of decorative slate exist in the Towhead Gulch area (USDI, Bureau of Mines 1988). The potential effects regarding this issue are evaluated by alternative for the Sleeping Giant WSA.

The report further states that the area holds an inferred subeconomic resource of 380,000 cubic yards of gravel containing an average of 0.0032 troy ounces of gold per cubic yard. The 1988 value of this mineral, based on a marketable gold price of \$410.00 an ounce, is \$1.31 per cubic yard less recovery costs. This material occurs in small elevated gravel bars along the Missouri River. The resource is considered subeconomic and no development is projected.

Finally, the report identifies the presence of strata-bound copper-silver minerals in the Precambrian Spokane Formation located in the northwest corner of the surveyed area. These minerals are located immediately west of the Sheep Creek WSA. The grade is considered too low to be economically mined in the foreseeable future.

With the exception of the ten decorative slate claims in Towhead Gulch, mining activity in this area has been minimal. No other claims exist within the two WSAs.

Alternative management strategies vary considerably in that the two WSAs would remain open to mineral entry under the no wilderness alternative while federal mineral entry would be closed under the all wilderness alternative.

Approximately 2,437 private acres of all-mineral estate exist within the two WSAs. Entry to this private subsurface would be allowed under both alternatives subject to similar mitigating measures. See Table 1-1 and the Mineral Ownership Map.

Despite the varying alternative management strategies and the split-mineral estate, this issue (with the exception of decorative stone) has been dropped from further consideration due to the low likelihood of any future mineral development.

Effects of Boundary Adjustments. The legal boundaries of the two WSAs were established through the inventory phase of the wilderness review process. See WSAs Location Map. This issue was dropped from further consideration since there are no adjoining land acquisitions pending or currently anticipated that would enhance the wilderness characteristics or manageability of the two WSAs. Conversely, there are no boundary reduction options that would significantly enhance wilderness management given the existing size, distribution of private minerals, and boundary characteristics of the WSAs.

Effects on Forestry Resources. This issue was eliminated since the two WSAs would be closed to timber harvest under both the all wilderness and no wilderness alterna-

tives. These areas' low quality timber and steep, inaccessible terrain would make harvesting costs prohibitive in any case.

Effects on Cultural and Historic Values. There are no known significant cultural resource sites in the WSAs. Predictive landform models based on the Butte District Class I Inventory (USDI, BLM 1984) suggest that the Sleeping Giant WSA may contain two to four significant prehistoric sites and that Sheep Creek may contain one to two such properties should inventories be completed. Use of some management techniques to protect and preserve cultural resources may be restricted if they interfere with the wilderness character of the area. However, alternative techniques will, in most cases, be adequate to stabilize deteriorating sites and structures. Scientific use of the sites may be allowed as long as the wilderness character is retained.

Although there is a low probability that cultural resources could be impacted by an inability to use a particular stabilization or protection technique within a designated wilderness, BLM's ability to actively manage cultural resources differs little from that on multiple-use lands.

Standard operating procedures and mitigating measures that apply to both alternatives ensure that no significant impacts will occur. All proposed ground-disturbing projects will be cleared through surveys and investigation efforts in advance. Therefore, the impacts on cultural resources resulting from various management alternatives require no further analysis.

Effects on Motorized Vehicle Use. Motorized forms of recreation are nonexistent given the areas' absence of vehicle ways and trails, limited access and physiographic barriers (steep terrain and dense vegetation). This issue was dropped from further consideration since the use of motorized vehicles is nonexistent within the two WSAs and would be restricted to special authorized purposes that are identical under both alternatives.

Effects on Recreation Activities and Visitation. The major recreational activities in the Sleeping Giant and Sheep Creek wilderness study areas are camping, big-game hunting, hiking and wildlife observation. Recreation use associated with these activities is estimated at about 4,000 visitor days per year, mainly during the summer and fall. The use of mountain bikes would not be allowed under either alternative.

This issue has been dropped from further consideration since the current primitive forms of recreation and use levels are not anticipated to change significantly by either the selection of the No Wilderness alternative (continuation of ACEC management) or the All Wilderness alternative. Although wilderness designation might stimulate an initial increase in use, long-term visitation would return to levels similar to that anticipated under ACEC management given the regional demand trends.

Effects on Water Quality. This issue was not analyzed since no water quality-related projects are foreseeable and no impacts to the resource are expected regardless of the alternative. Water quality management would be identical under both alternatives.

Effects on Livestock Production and Grazing Management. Livestock grazing on the two range allotments within the WSAs would continue to be managed at the current authorized level of 391 AUMs under either alternative. There are no range improvements in existence that will require rou-

tine maintenance. Routine livestock management duties would be accomplished on horseback or foot under both alternatives. Motorized access under either alternative would be allowed to resolve emergencies and to install approved project developments where need exceeds the practical and reasonable limits of horse or foot usage.

New projects planned for construction within portions of the two WSAs include about two-and-one-half miles of fence and a spring development with about three quarters of a mile of buried pipeline to a stock watering tank. These projects, with the exception of two small enclosure fences totaling about one-half mile, have been mitigated and approved through the Oxbow Allotment Management Plan/EA. The purpose of these range improvements is to enhance the natural and vegetative conditions by influencing cattle use and distribution. These projects would be allowed to occur with the same mitigating measures (construction, color, design and location) under either alternative. This issue was dropped since there are no varying effects to or from the resource for either alternative considered.

Effects on Fish and Wildlife. The WSAs provide habitat for a wide variety of wildlife species that include elk, bighorn sheep, mountain goats, mule deer, black bear, furbearers, osprey, golden eagles, cutthroat and brook trout, and waterfowl, and the threatened and endangered species of bald eagles and peregrine falcons. No wildlife projects are existing or planned, and no foreseeable actions under either alternative would significantly impact wildlife habitat. This issue has been dropped from further consideration since management strategies under both alternatives are similar. Fish and wildlife are considered supplemental features for both WSAs and are further addressed under wilderness values.

Effects on Threatened & Endangered Plants. This issue was dropped since no such species are known to exist in the two WSAs.

Effects on the Local Economy. This issue was dropped since the difference in economic consequences between the alternatives would be insignificant.

Alternatives Dropped from Further Analysis

Consolidation of Both WSAs as One Study Area. This alternative was considered given the proximity of the two WSAs. It was dropped from further consideration because of two factors:

- The existence of the powerline right-of-way and associated maintenance road dividing the two WSAs.
- The fact that the Sheep Creek review is being conducted under Section 202 of FLPMA while Sleeping Giant is being reviewed under Section 603 of FLPMA.

Designation of both WSAs as a National Conservation Area. This alternative, which would legislatively ensure long-term management of the two study areas similar to that prescribed by the existing ACEC management plan, would result in impacts essentially identical to the No Wilderness alternative.

Scoping Criteria Specific to the Sleeping Giant WSA

Issues to be Further Analyzed

Wilderness Values. How will the wilderness values of naturalness, solitude, primitive and unconfined forms of recreation, and supplemental features be affected if the area is not designated wilderness?

Decorative Stone. The WSA contains slate deposits of commercial value for decorative stone and ten such mining claims exist. How will opportunities for exploration and excavation of this resource be affected under wilderness as compared with nonwilderness?

Issues Dropped from Further Consideration

Shoreline Erosion Abatement. The high-water mark of Holter Lake serves as the WSA boundary. Shoreline erosion control, whether initiated by BLM or the Montana Power Company, would be allowed under either alternative to prevent soil losses that threaten resource values. Mitigating measures governing these actions would be similar under both alternatives, in that overland motorized equipment will not be used to transport erosion-control material where more primitive equipment could do so. New roads would not be built and the preferred access route would be over water. Logs and other natural materials would be positioned at the base of slumping cliffs to break wave action and retain soils. This issue was dropped from further consideration since shoreline erosion-control efforts would be allowed and mitigated similarly under either alternative.

Alternatives to be Further Analyzed

All Wilderness. Designation of the entire WSA as wilderness.

No Wilderness. Designation of none of the WSA as wilderness and continued management as an ACEC.

Scoping Criteria Specific to Sheep Creek

Issues to be Further Analyzed

Wilderness Values. How will the wilderness values of naturalness, solitude, primitive and unconfined forms of recreation, and supplemental features be affected if the area is not designated wilderness?

Alternatives to be Further Analyzed

All Wilderness. Designation of the entire WSA as wilderness.

No Wilderness. Designation of none of the area as wilderness and continued management as an ACEC.

CHAPTER 2

DESCRIPTION OF ALTERNATIVES INCLUDING THE PROPOSED ACTION

INTRODUCTION

Two alternatives are considered for each of the two WSAs in this document: No Wilderness (Proposed Action) and All Wilderness. Land acquisition, consolidation of both WSAs, partial wilderness, and other special designation alternatives were considered, but were dropped from detailed analysis during scoping. The rationale for eliminating these alternatives is presented in Chapter 1 under the issue subheading Effects of Boundary Adjustments, and the heading, Alternatives Dropped from Further Analysis. See Alternative Maps for each WSA.

For purposes of clarity and consistency in this wilderness EIS, the following points should be commonly understood. The proposed action and the agency's preferred alternative are the same. No wilderness, no action, and current management are synonymous in that the two WSAs is managed under the guidance of the ACEC Management Plan and the Headwaters Final RMP. The proposed action for both WSAs is No Wilderness and will be presented first throughout this document.

ALTERNATIVE MANAGEMENT DESCRIPTIONS COMMON TO BOTH WSAS BY RESOURCE

The following alternative descriptions are common to both WSAs and are presented together because management guidelines governing the various resource activities would be similar for the two areas. Under the no wilderness alternative, management guidance is provided by the Sleeping Giant ACEC Plan (Appendix B); under the all wilderness alternative the two WSAs would be managed in accordance with the BLM Wilderness Management Policy document.

No Wilderness Alternative (Proposed Action)

ACEC Management

The proposed action recommends that the Sleeping Giant and Sheep Creek WSAs not be designated wilderness. The two WSAs would be managed as an ACEC which was administratively endorsed through the Headwaters Final RMP in 1984. The management goals of the area are to preserve the natural resource values, the high scenic and visual qualities, the wide variety of primitive recreation opportunities, and the native wildlife species.

Leasable Minerals Management (Oil and Gas)

The two WSAs would be closed to surface occupancy on all BLM lands where the surface and subsurface are under federal management. Leases would be issued as required to avoid drainage of federal minerals. Oil and gas exploration and development of private mineral estate would be allowed at the owner's discretion subject to mitigating measures to prevent unnecessary and undue degradation.

Locatable Minerals Management

Federal subsurface lands within the WSAs under ACEC management would be open to locatable mineral entry subject to unnecessary and undue degradation standards, a plan of operations, and an adequate bond to ensure reclamation performance. Private subsurface lands would be available for exploration and development at the owner's discretion, and associated activities would be governed only by unnecessary and undue degradation standards. Under these standards motorized equipment would be limited to the minimum required, reasonable access routes would be sensitive to resource values, and mining disturbances would be restored to a condition that is unobtrusive and as close to the original state as possible.

Decorative Stone Management. Approximately 25 acres or 420,000 tons of mineable slate deposits located in the Towhead Gulch area of the Sleeping Giant WSA would be open to exploration and excavation. Some 56 acres or 930,000 tons of comparable reserves located outside the WSA would also be available. The claimant plans to continue mining slate within these claims at a rate of about 100 tons per year. Given this information the following scenario is most likely to occur.

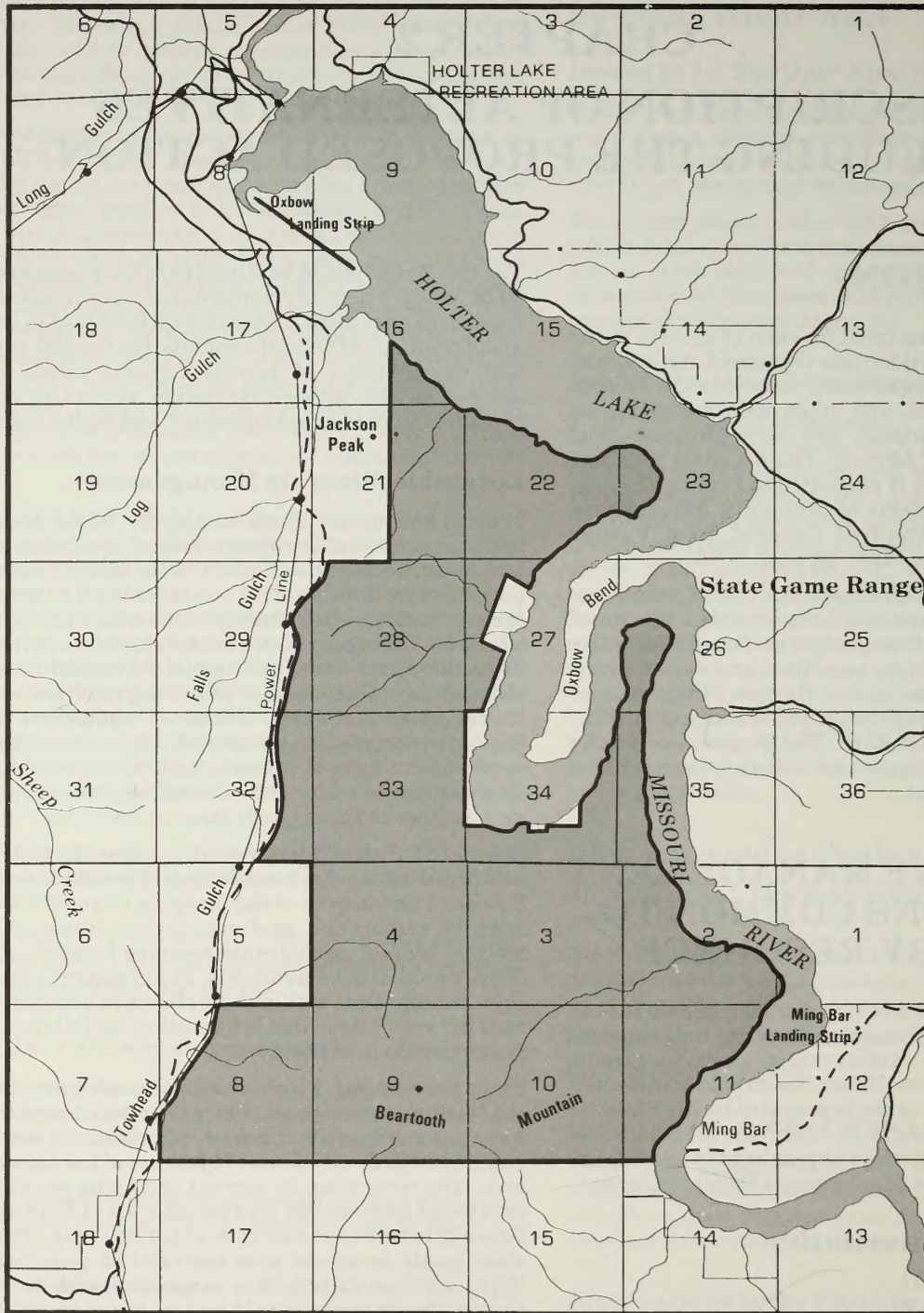
Since the reserves within the 56-acre area located outside the WSA are more accessible, are better consolidated, and have been mined in the past, expectations are that the claimant will direct at least 75 percent of his activity in this area. The remaining 25 percent or 25 tons per year will be excavated from within the Sleeping Giant WSA boundary. Given this rate of production about 500 tons of decorative slate would be mined over the next 20 years within the WSA. Surface disturbance associated with this activity over a 20-year period would impair about one-tenth acre.

Mining activities within the ACEC would be subject to an approved plan of operations, and an adequate bond for reclamation, as well as unnecessary and undue degradation standards. Motorized equipment would be limited to the minimum required and reclamation measures would necessitate the restoration of disturbed lands to a condition that is unobtrusive and as close to its original state as possible.

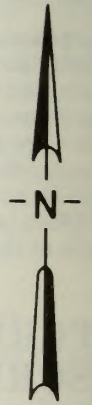
Salable Minerals Management

Federal subsurface estate would be closed to salable min-

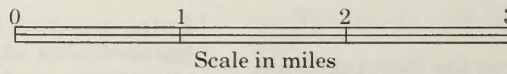
R. 3 W.






T.
14
N.



T.
13
N.



-  Sleeping Giant WSA Boundary
-  No Wilderness (no portion of the area recommended for wilderness designation)
-  All Wilderness (entire area recommended for wilderness designation)

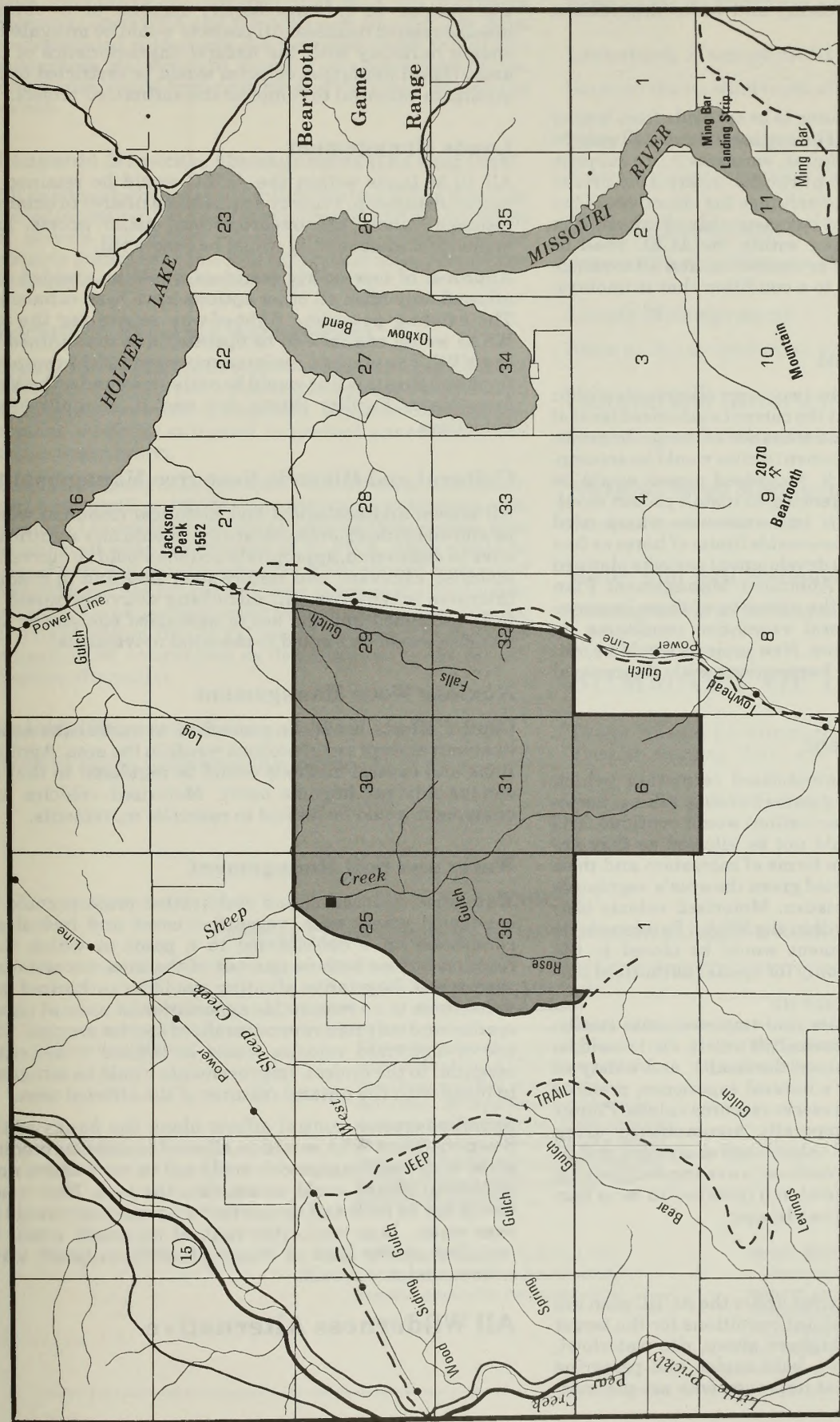
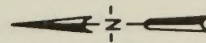
**SLEEPING GIANT
WILDERNESS STUDY AREA
MT-075-111A
ALTERNATIVES MAP**

R. 3 W.

R. 4 W.

T. 14 N.

T. 13 N.



Sheep Creek WSA Boundary

No Wilderness (no portion of the area recommended for wilderness designation)

All Wilderness (entire area recommended for wilderness designation)

SHEEP CREEK WILDERNESS STUDY AREA MT-075-111B ALTERNATIVES MAP

Scale in miles

eral entry, while private subsurface lands would be available for the excavation of mineral materials at the owner's discretion subject to unnecessary and undue degradation standards.

Timber Management

All forested lands will continue to be set aside from timber harvest and management. The cutting of trees will only be allowed for valid mining claims, emergency fire suppression, and administrative purposes where authorized improvements to preserve or enhance the objectives of the plan are needed and cannot be reasonably obtained from outside sources. Such cutting within the ACEC shall be conducted away from trails or campsites, and all evidence of cutting shall be reduced to a condition that is unobtrusive to visitors.

Livestock Management

Livestock management of the two range allotments within the WSAs would continue at the current authorized level of 391 AUMs. The routine maintenance of range improvements and livestock management duties would be accomplished by foot or horseback. Motorized access would be authorized to resolve emergencies, to install project developments, and to maintain improvements where need exceeds the practical and reasonable limits of horse or foot usage. The fence and spring development projects planned to implement the Oxbow Allotment Management Plan would be authorized since the objective of these improvements is to improve natural vegetative conditions by influencing cattle distribution. New projects would be mitigated so that they are as harmonious with the natural setting as possible.

Recreation Management

The primary forms of nonmotorized recreation (which include fishing, camping, big-game hunting, hiking, horseback travel and wildlife observation) would continue. The use of mountain bikes would not be allowed as they are incompatible with primitive forms of recreation and their use would be heavily restricted given the area's vegetative and topographic characteristics. Motorized vehicle uses are currently nonexistent within the WSAs. Future vehicle use under ACEC management would be closed to the general public and allowed only for special authorized purposes.

The construction of facilities and improvements (trails, signs, fences, fire rings, chemical pit toilets, etc.) would be provided as required to ensure the health and safety of people, enhance the visitor's natural experience, promote visitor dispersement, and preserve resource values. Project developments would be generally accomplished using primitive means. Motorized vehicle and equipment will be used only where other alternatives prove impractical. All improvements will be designed and installed to be in harmony with the surrounding landscape.

Wildlife Management

Wildlife management objectives under the ACEC plan are to maintain satisfactory habitat conditions for the target species of mountain goat, bighorn sheep, elk, waterfowl, cold-water fisheries, ospreys, bald eagles and peregrine falcons. Although no habitat improvements are planned,

future projects would be allowed to maintain populations of target species, to promote threatened, endangered or sensitive species, to enhance fishery habitat, or to control disease-related hazards. All projects would be mitigated to ensure harmony with the natural characteristics of the area. Use of motorized vehicles would be restricted to the minimum essential to complete the authorized project.

Lands Management

All BLM lands within the ACEC would be retained in public ownership. Priority acquisitions needed to enhance resource values, use opportunities, visitor access, and areawide manageability would be conducted.

Approval of new utility corridors would be avoided and allowed only after all other options have been exhausted. The existing powerline right-of-way separating the two WSAs would continue to be operated and maintained by the MPC. The planned maintenance needs of the company for managing this line would be authorized under the Montana Major Facility Siting Act and BLM multiple-use guidelines.

Cultural and Historic Resource Management

All known archaeological and historical resources would be allowed to deteriorate naturally. Should any significant sites be discovered, appropriate actions would be allowed to stabilize, excavate, and restore such sites and to conduct intensive inventories. All disturbing activities would be fully reclaimed and the use of motorized equipment and vehicles would be limited to essential movements.

Noxious Weed Management

Control efforts would be conducted to curtail the establishment and spread of noxious weeds in the area. Applications and control methods would be regulated so that no serious adverse impacts occur. Motorized vehicles and equipment would be limited to essential movements.

Water and Soil Management

Watershed restoration and stabilization projects could be conducted where soils, vegetative cover and hydrologic conditions have deteriorated to a point at which that resource values both in and out of the area are seriously threatened. Vegetative planting would be authorized provided there is no reasonable expectation of natural regeneration and only native or naturalized species are used. The use of motorized vehicles would be limited to activities essential to the project. Improvements would be mitigated to blend with the natural features of the affected area.

Shoreline-erosion control efforts along the banks of the Sleeping Giant WSA would be allowed to stabilize eroding soils. Motorized equipment would not be used where non-motorized means could accomplish the task. New roads would not be built and the preferred access route would be over water. Logs and other natural materials would be installed at the base of slumping cliffs to break wave actions and retain soils.

All Wilderness Alternative

Wilderness Management

This alternative recommends that both the 6,487-acre Sleeping Giant WSA and the 3,927-acre Sheep Creek WSA be designated wilderness and managed under the BLM's Wilderness Management Policy. Legislative designation would ensure long-term protection of the areas' wilderness values.

Leasable Minerals Management (Oil and Gas)

All public subsurface lands within the two WSAs would be closed to leasing. Oil and gas exploration and development of private subsurface rights would be allowed at the owner's discretion subject to mitigating measures to prevent unnecessary and undue degradation.

Locatable Minerals Management

Federal subsurface lands would be closed to locatable mineral entry while the private subsurface lands would remain available at the owner's discretion. Exploration and development would be mitigated to prevent unnecessary and undue degradation.

Decorative Stone Management. The 25 acres of commercial slate totalling 420,000 tons within the wilderness area would not be available for excavation as these claims were established after the passage of FLPMA. Slate would be mined only from the 56-acre area with inferred reserves of 930,000 tons. The life span of these reserves at a production rate of 100 tons per year would be about 9,300 years. Mining activities within the ACEC would be subject to the same management constraints as described under the no wilderness alternative.

Salable Minerals Management

Same as the no wilderness alternative.

Timber Management

Same as the no wilderness alternative.

Livestock Management

Same as the no wilderness alternative.

Recreation Management

Same as the no wilderness alternative.

Wildlife Management

Same as the no wilderness alternative.

Lands Management

Same as the no wilderness alternative.

Cultural and Historic Resource Management

Same as the no wilderness alternative.

Noxious Weed Management

Same as the no wilderness alternative.

Water and Soil Management

Same as the no wilderness alternative.

SUMMARY OF IMPACTS

Tables 2-1 and 2-2 summarize the impacts of the alternatives for Sleeping Giant and Sheep Creek WSAs.

TABLE 2-1
COMPARATIVE SUMMARY OF IMPACTS FOR SLEEPING GIANT WSA

Issue	No Wilderness Alternative (Proposed Action)	All Wilderness Alternative
Wilderness Values	Given the protective management emphasis of the ACEC plan and the remote possibility of impairing activities, no significant wilderness degradation is expected. Slate mining disturbances of 1/10 of an acre would temporarily degrade naturalness and solitude values within an affected area of about 200 acres.	Wilderness values would be permanently protected on entire area.
Decorative Stone Mining	All 81 acres or 1,350,000 tons of commercial slate reserves would remain available for excavation.	Some 56 acres or 930,000 tons of commercial slate reserves would remain available for excavation. Remaining 25 acres or 420,000 tons of slate reserves estimated to be within the WSA would be closed to mineral entry.

TABLE 2-2
COMPARATIVE SUMMARY OF IMPACTS FOR SHEEP CREEK WSA

Resource Values/Uses	No Wilderness Alternative (Proposed Action)	All Wilderness Alternative
Wilderness Values	No wilderness-impairing activities under the ACEC Management Plan are foreseeable.	Wilderness values would be permanently protected for entire area.

CHAPTER 3

AFFECTED ENVIRONMENT

INTRODUCTION

This chapter describes the environmental resources specific to the issues analyzed in this document for each WSA. The Appendix section of this document presents additional information related to this chapter:

- Sleeping Giant ACEC Management Plan (Appendix B)
- Wilderness Inventories (Appendix C)
- Additional Wilderness Factors Considered (Appendix D)

ISSUE RELATED RESOURCES OF THE WSAs

Sleeping Giant WSA

General Description

The Sleeping Giant WSA encompasses 6,487 acres of public surface land within private surface inholdings.

The WSA is located in Lewis and Clark County adjacent to Holter Lake. Helena, the state capitol of Montana, is approximately 30 miles south; while Great Falls is some 60 miles to the northeast. Public access to this area is available along Holter Lake or from the Interstate 15 frontage road to the BLM Wood Siding Gulch Road, which terminates west of the Sheep Creek WSA boundary.

The boundaries of the WSA are established by the Holter Lake high-water mark and private land to the north and east; by private and public land to the south; and by private land and the powerline right-of-way or its maintenance road to the west. The configuration of this area is irregular with north-south distances varying from two to five miles and east-west distances ranging from just over one mile to three miles. See the Sleeping Giant Status Map.

The Sleeping Giant WSA is characterized by steep, irregular topography with elevations ranging from 3,578 feet along the lake to 6,792 feet at the summit of Beartooth Mountain. The dominant topographic feature is the north-south trending mountain range associated with Beartooth Mountain. The east-west trending ridge forms the well-known landmark of the Sleeping Giant. This figure is visible from Helena and is formed by the skyline profile of Beartooth Mountain and the lower, vertical rock outcroppings that were referred to as "bear teeth" by pioneers in the Helena valley. An earthquake in 1878 created landslides that altered the beartooth outcroppings and formed the giant's current facial features. See Sleeping Giant Topographic Map.

The lower elevations are composed of numerous steep and narrow valleys. These lands drain into the lake to the east,

est, Towhead and Falls gulches to the west and Beartooth Creek to the south. There are no perennial streams in the WSA. The shoreline of the WSA extends about ten miles. Frontage lands vary from gentle, grassy slopes to rocky cliffs.

The climate of the area is typified by warm summers and cold winters. Most precipitation occurs during the spring and summer months as thundershowers. The average precipitation is 15 inches per year.

Approximately half of the area is covered by slow growing stands of ponderosa pine, limber pine, lodgepole pine, Douglas fir and cottonwood trees. The density and composition vary with aspect and elevation. The nonforested portions are composed of sedimentary rock outcroppings, talus slopes and native grasslands.

Wilderness Values

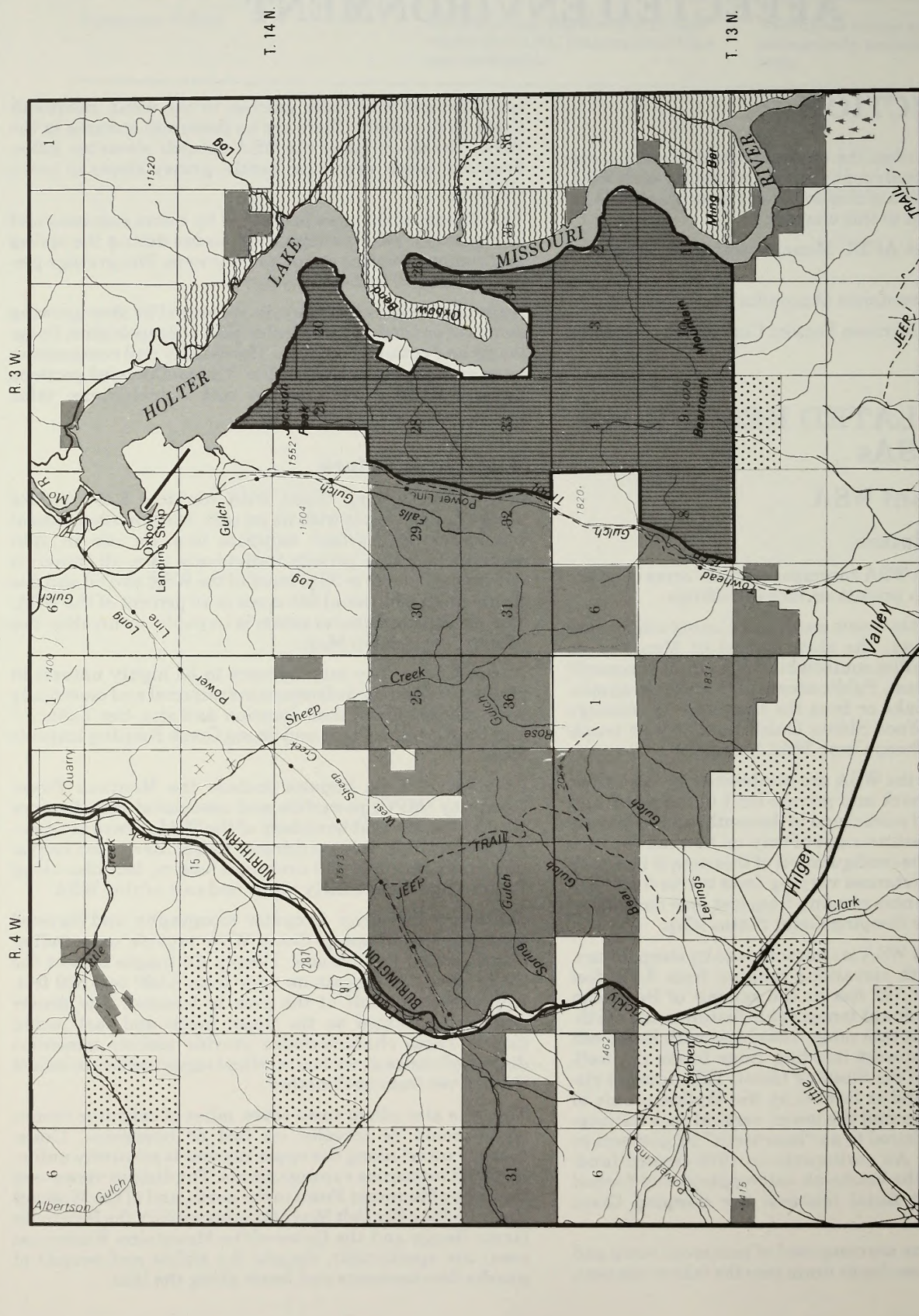
Size. The Sleeping Giant WSA contains 6,487 surface acres of public lands with no private, state or other federal inholdings. Subsurface minerals however are in split ownership. Three private individuals own all minerals within 1,967 acres or 30 percent of the WSA and oil and gas rights in an additional 640 acres or 10 percent of the WSA. The remaining mineral estate is in public ownership. See Mineral Ownership Map.

Naturalness. The area appears to be highly natural in character. Man-made features are minimal and essentially unnoticeable given their location and size. See Table 3-1 and the Sleeping Giant and Sheep Creek Existing Impacts Map.

Proximity off-site impacts include the Montana Power Company (MPC) powerline and associated maintenance road along the west boundary of the WSA. There are passing motor boats, private summer homes, developed recreation areas, marinas and overnight lodging facilities along Holter Lake immediately north and east of this WSA.

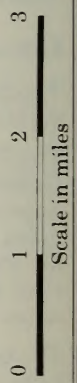
Solitude. The steep, irregular topography and forested slopes of the Sleeping Giant WSA provide outstanding opportunities for solitude. Twenty drainages dissect the study area and elevations vary from 3,600 to 6,800 feet. Approximately half of the area is forested. The denser stands are located on the upper north and east facing slopes. These characteristics provide visitors numerous dispersed routes as well as excellent opportunities to isolate themselves from one another.

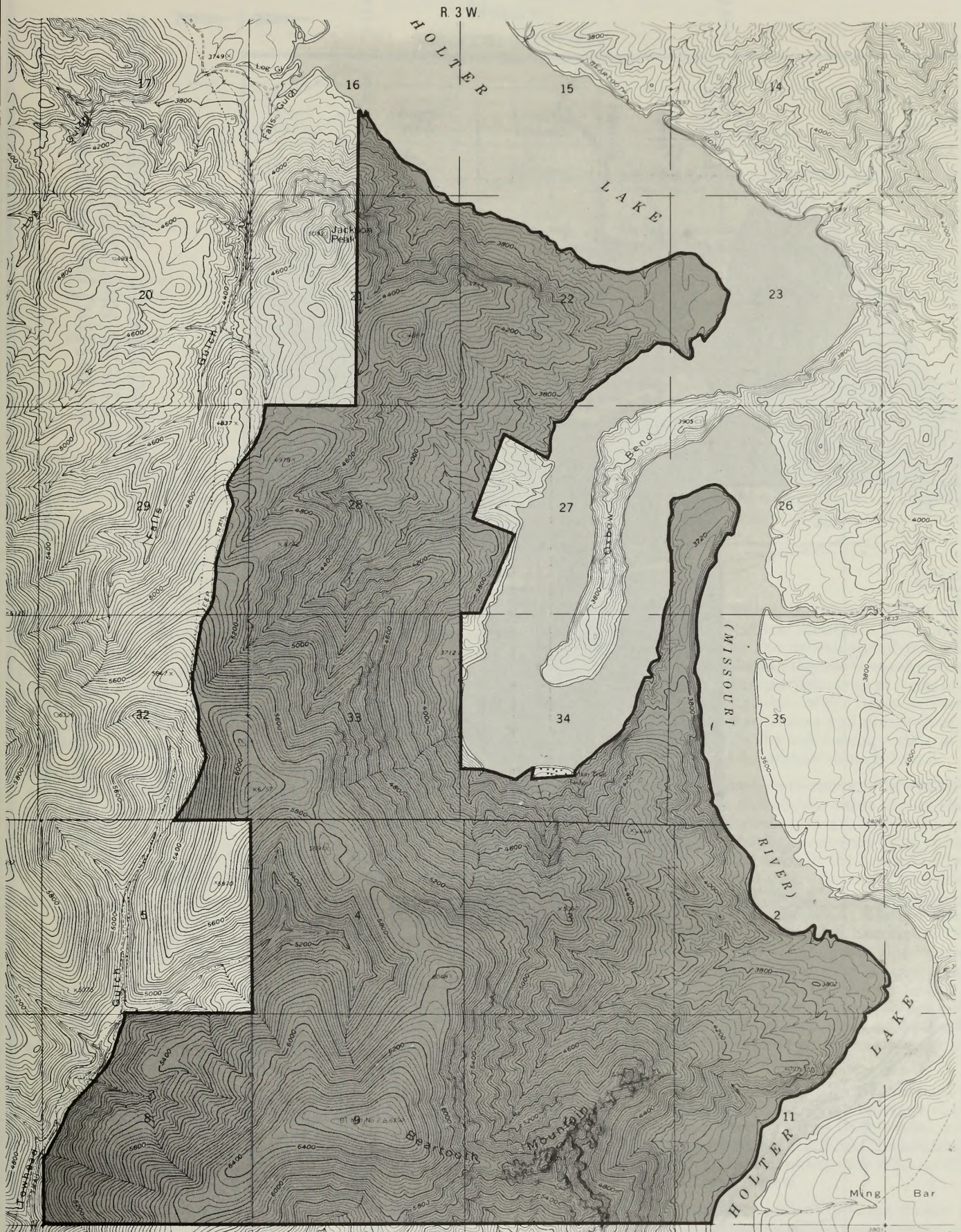
The area also offers some seven miles of ridgeline routes, which could be traveled on foot or horseback. Cross-country travel along the upper reaches is relatively unlimited with numerous vantage points. The distant views — of the Rocky Mountain Front to the north, and of the Missouri River and the Big Belt Mountains (especially the Beartooth Game Range and the Gates-of-the-Mountains Wilderness area) are spectacular, despite the sights and sounds of nearby developments and boats along the lake.





SLEEPING GIANT WILDERNESS STUDY AREA MT-075-111A STATUS MAP

- BLM
- Private
- State
- State Game Range
- Forest Service
- Sleeping Giant WSA (including Jackson Peak Add-on)

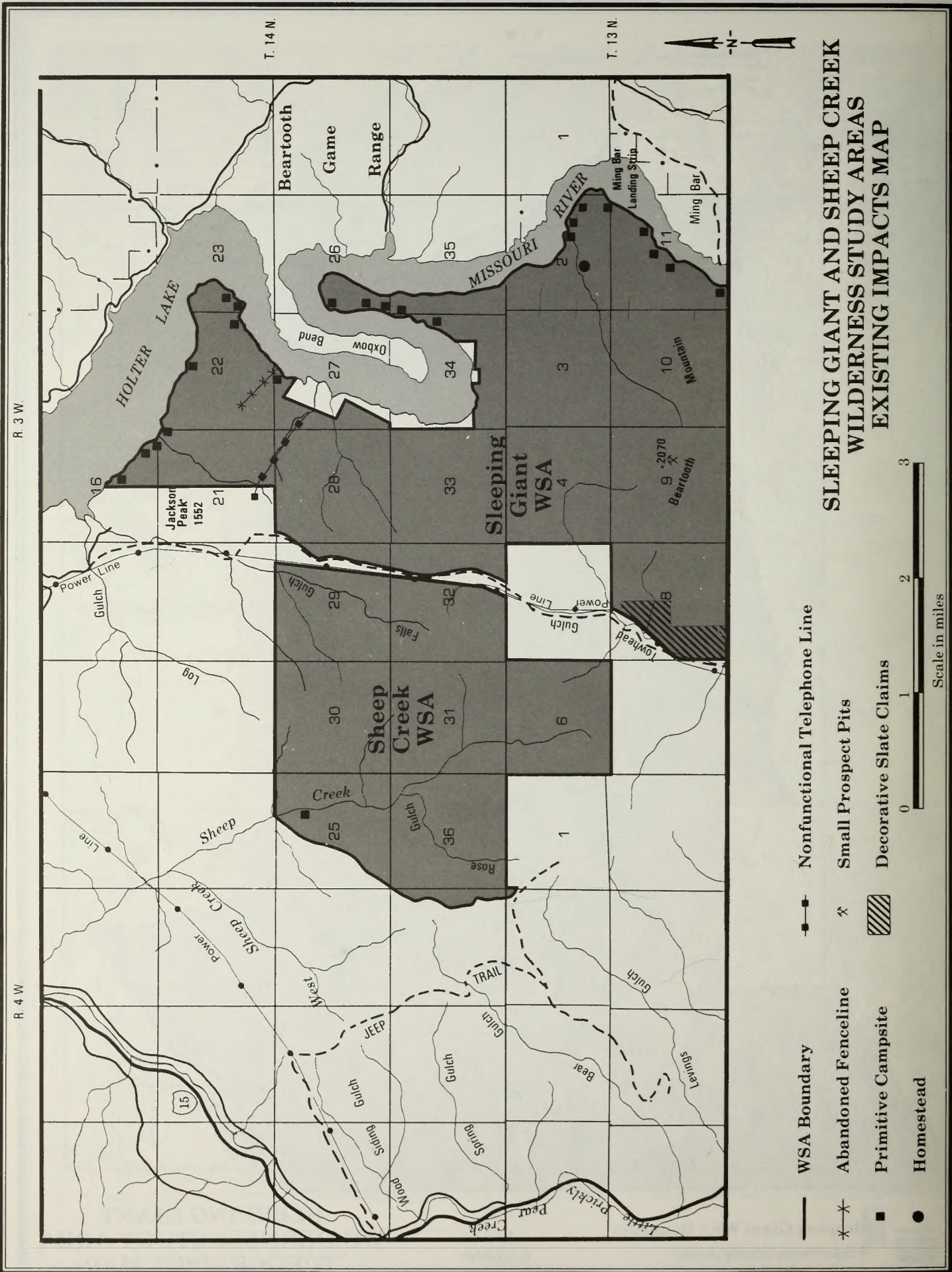




 Sleeping Giant WSA Boundary
 Wilderness Study Area

Scale
 1:40,000

**SLEEPING GIANT
 WILDERNESS STUDY AREA
 TOPOGRAPHIC MAP**



**SLEEPING GIANT AND SHEEP CREEK
WILDERNESS STUDY AREAS
EXISTING IMPACTS MAP**

TABLE 3-1
SLEEPING GIANT WSA
EFFECTS ON NATURALNESS

Feature	Legal Location	Length/Acre	Overall Impact	Remarks
Abandoned fence	T14N, R3W, S.22	1/2 mi	Minimal	Consists of fallen wood posts and barbed wire. Will be removed.
Old homestead	T13N, R3W, S.2	1 acre	Minimal	Includes an old cabin, storage shed, small barn, outhouse and weathered frame house.
Nonfunctional telephone line	T14N, R3W, S. 21, 27 & 28	1/2 mi	Minimal	Suspended along trees. Down and cut in areas. Will be removed.
Prospect pits	T13N, R3W, S. 10	10'x6'x4'/pit	Minimal	Four small depression areas.
Campsites	Along shoreline	20'x20'/site	Minimal	Twenty-two primitive sites consisting of stone fire-rings and level tent spots.

Overall, the WSA's natural, topographic, vegetative and scenic qualities combine to provide visitors with a powerful sense of being alone in nature.

Primitive Recreation. The diverse physical characteristics of the WSA provide many opportunities for primitive and unconfined types of recreation. These opportunities range from winter snowshoeing to summer swimming. Other quality activities include hunting, fishing, backpacking, hiking, rock climbing, horse travel, nature study and photography. In addition, the shoreline offers river recreationists many undeveloped and dispersed sites for picnicking and camping. Although there are no exceptional recreational activities that stand out above those of the surrounding area, the cumulative opportunities provided by the WSA for yearlong primitive recreation are considered outstanding.

Supplemental Values. The Sleeping Giant WSA, although small in size contains a large variety of resources that are of scientific, educational, historic and geologic importance.

- The Sleeping Giant formation is a well-known landmark and is readily visible from the state's capitol city.
- The Lewis and Clark expedition passed through this area in 1805, on its westward trek across the continent. As a consequence, a portion of the WSA is part of the Lewis and Clark National Historic Trail.
- The remaining structures associated with an abandoned homestead typify the past lifestyle of earlier settlers.
- Spectacular panoramic views of the Rocky Mountain ranges are available to ridgeline travelers.
- There is a great diversity of important wildlife species. The biggest attraction is a thriving population of about 65 mountain goats that occupy the rock outcroppings and lower slopes of the Sleeping Giant geologic structure as well as other parts of the WSA. Other common species are elk, black bear, mule deer, osprey and golden eagles. A small herd of bighorn sheep can also be seen occasionally in the area. Potentially significant habitat is also available for bald eagles and pere-

grine falcons, both of which are on the federal threatened and endangered species list. Although no active nests are known to exist within the WSA, these birds nest in the general vicinity and are expected to inhabit the WSA in the future.

Decorative Stone

Geologically, the area is within the disturbed belt of the Rocky Mountains in west-central Montana. The majority of the area was formed by the movement of the major Eldorado overthrust sheet during the late Cretaceous-early Tertiary time. This sheet consists primarily of rocks of the Proterozoic Belt Supergroup, slate of the Greyson Formation, and the overlying red siltstones and argillites of the Spokane Formation. It is in the sedimentary slate of the Greyson Formation where decorative stone is found.

The most decorative and marketable material is weathered rock that is readily split and shows oxide stains along bedding planes. Slate resources are large, both within and outside the study area. The most commercial and accessible deposits within the WSA exist in the lower Towhead Gulch area and are specific to the ten placer claims totaling some 190 acres in T13N, R3W, Sec. 8. About 50 percent of these claimed acres lie within the WSA. Edward Sperry located these decorative stone claims in September 1977, and he has mined about 1,200 tons of this slate to date. These quarries are currently inactive. Primary marketable uses for the product include primarily indoor facing for building lobbies, den walls, fireplaces, and stove pads. The stone also may be used for exterior walls and chimney facing. It is not suitable for floors or patios since the iron oxide stains will wear off when walked on.

The Bureau of Mines estimates that about 81 acres of the 10-claim area are mineable with inferred reserves of 1.35 million tons of decorative facing stone. Of this total, some 25 acres or 420,000 tons are within the WSA. The remaining 56 acres of commercial slate exist outside the WSA on BLM lands not under wilderness review.

The claimant plans to excavate about 100 tons of slate per year. To do this the stone must be ripped and loosened by a bulldozer, hand-split and loaded onto pallets, and then

shipped to markets. The profit per ton for this slate is estimated at about \$70 based on a market price of \$200 and overall costs of \$130.

Sheep Creek WSA

General Description

The Sheep Creek WSA consists of 3,967 acres of public surface land with no private surface inholdings. Subsurface minerals are in split ownership.

The WSA is located in Lewis and Clark County immediately west of the Sleeping Giant WSA and is separated from that WSA by the Towhead/Falls Gulch powerline and maintenance road. Helena, the state capitol of Montana, is 30 miles south while Great Falls is some 60 miles to the northeast. Public access to this area is available from the east along the shoreline of the Sleeping Giant WSA and via the Wood Siding Gulch Road which originates from the Interstate 15 frontage road in Section 33, T14N, R4W. See the Sheep Creek Status Map.

The boundaries of the WSA are established by private land to the north and south, by non-WSA public lands to the west, and by the powerline right-of-way or its maintenance road to the east. The WSA's east-west distances average about three miles and its north-south distances range between two and three miles.

The Sheep Creek WSA is characterized by steep topography with elevations ranging from 4,080 feet along Sheep Creek to 6,600 feet at the highest peak in Section 35, T14N, R4W. Topographic ridges rim the area along its west, south and east boundaries. An interior north-south ridgeline roughly bisects the area. These higher areas drain primarily north into the interior drainage of Rose Gulch, Sheep Creek and Falls Gulch. Perennial streams and a vast array of riparian vegetation exist along the lower portions of these three drainages. See Sheep Creek Topographic Map.

Approximately half of the area is covered by slow-growing stands of Douglas fir, ponderosa, limber and lodgepole pine. The nonforested areas are composed of sedimentary rock ledges, talus slopes and native grasslands.

The climate of the area is typified by relatively warm summers and cold winters. Most precipitation occurs during the spring and summer months as thundershowers. The average precipitation is about 15 inches per year.

Wilderness Values

Size. The Sheep Creek WSA contains 3,967 surface acres of public land with no private, state or other federal inholdings. Subsurface minerals are in split ownership. Four private parties own all minerals in 470 acres or 12 percent of the WSA and oil and gas rights on an additional 1,250 acres or 31 percent of the WSA. The remaining mineral estate is in public trust administered by BLM. See Mineral Ownership Map.

Naturalness. The entire WSA is pristine. It displays no significant signs of past human activity. Only one primitive campsite was found within the WSA.

Solitude. Despite its small size, the area provides outstanding opportunities for solitude due to its scattered patches of forest vegetation and its irregular topography with dissecting drainages. These screening qualities allow visitors easily to avoid the sights and sounds of others. The feeling of isolation is readily sensed within the dense vegetation of both Sheep Creek and Rose Gulch.

Mixtures of open and timbered areas exist along the upper slopes allowing visitors the opportunity to avoid one another and to appreciate the spectacular distant views. Along the relatively open ridges are vistas of Rocky Mountain ranges and valleys. Although Interstate 90, distant ranch buildings, and the Towhead/Falls Gulch powerline can be seen from several vantages, these intrusions do not substantially degrade the area's solitude.

Primitive Recreation. The WSA's irregular topography, varied vegetation, rock ledges, naturalness, excellent wildlife diversity, and overall ability to disperse visitor use provide outstanding opportunities for primitive and unconfined recreation. Activities include hunting, fishing, hiking, rock climbing, horseback riding, camping and nature study.

Since the surrounding areas offer similar quality opportunities, wilderness recreation within the WSA is not considered exceptional. However, the diversity of these activities is considered outstanding.

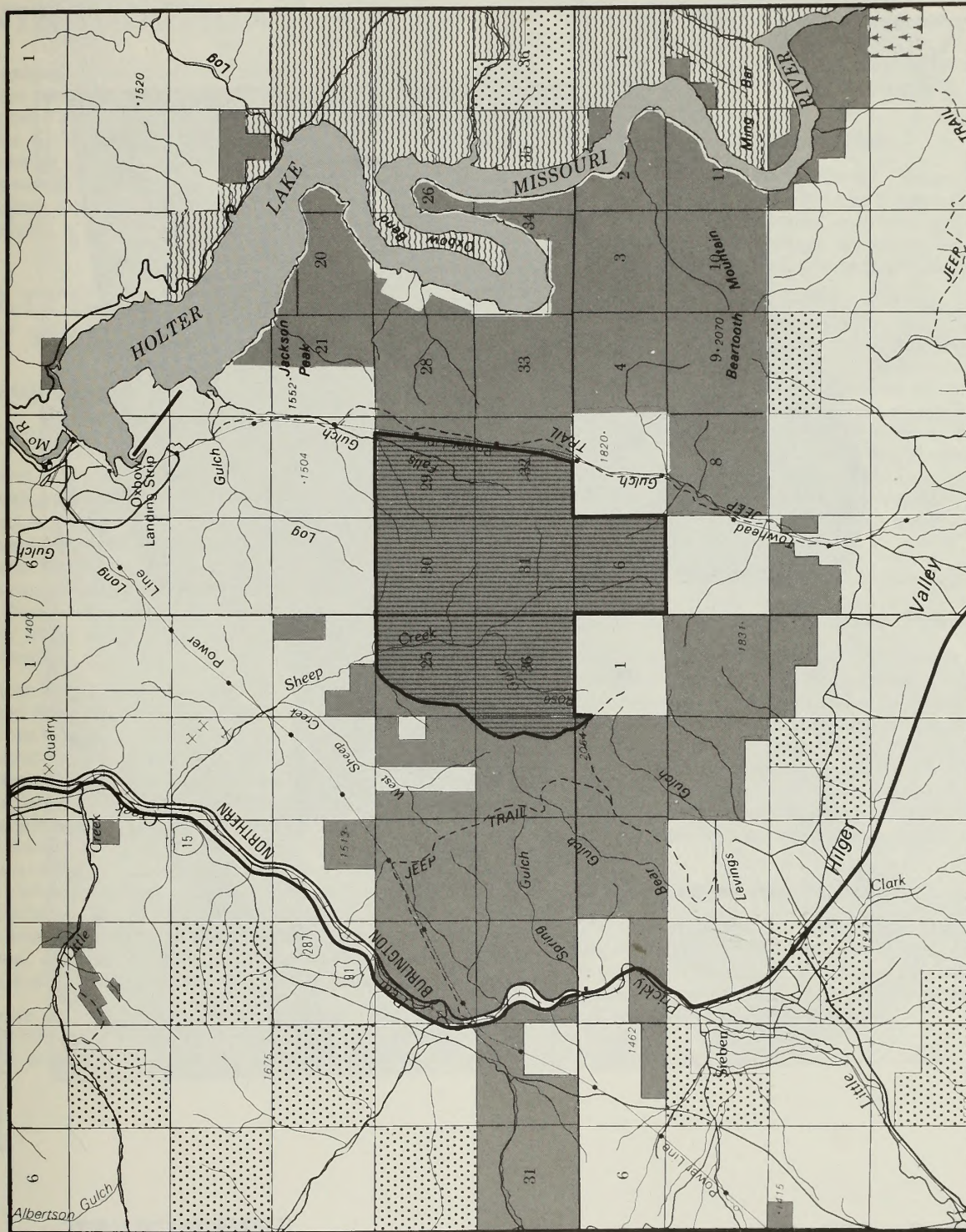
Supplemental Values. The supplemental values found in the Sheep Creek WSA are scenic vistas and diversity of wildlife species. Distant views include the Rocky Mountain Front, the vast prairies to the north and east, and the Big Belt Mountains of which the Beartooth Game Management Area and the Gates-of-the-Mountains Wilderness Area are a part. Wildlife species include mountain goats, bighorn sheep, black bear, elk, mule deer and golden eagles.

R. 4 W.

R. 3 W.

T. 14 N.

T. 13 N.



SHEEP CREEK WILDERNESS STUDY AREA MT-075-111B STATUS MAP

- BLM
- Private
- State
- State Game Range
- Forest Service
- Sheep Creek WSA

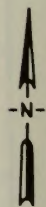
R. 4 W.

R. 3 W.



T. 14 N

T. 13 N



- Sheep Creek WSA Boundary
- Wilderness Study Area

Scale
1:40,000

SHEEP CREEK WILDERNESS STUDY AREA TOPOGRAPHIC MAP

CHAPTER 4

ENVIRONMENTAL CONSEQUENCES

INTRODUCTION

This chapter documents the significant effects of the alternative management actions presented in Chapter 2. The proposed action is presented first. Manageability concerns under the All Wilderness alternative for both WSAs are presented in Appendix D. Insignificant effects and effects that would not vary between alternatives are discussed in Chapter 1 under Issues That Do Not Require Detailed Analysis.

ALTERNATIVE ANALYSIS BY WSA

Sleeping Giant WSA

No Wilderness Alternative (Proposed Action)

Effects on Wilderness Values. The consequences of selecting the No Wilderness alternative (ACEC Management) will not subject the area's wilderness values (naturalness, solitude, primitive recreation, and supplemental values) to any significant degradation despite the lack of statutory wilderness designation. No impairing actions are foreseeable under ACEC management that substantially differ from those expected under wilderness management.

It is anticipated that 100 tons of decorative slate will be mined from the 10-claim area annually and that about 25 percent of this quarried slate will come from the WSA. The excavation of some 25 tons of decorative slate per year and the resultant disturbance of about one-tenth of an acre over a period of 20 years would have a minimal impact on the naturalness and solitude of the area. Given the small size of the disturbance, its location within the lower extremity slopes of the WSA, and its proximity to the existing powerline and access road, the area of influence would be limited. Impacts on the supplemental value of wildlife are also minimal given the area's small size, location, existing road access, and low habitat importance. Effects on primitive forms of recreation would be unnoticeable.

Effects on Decorative Stone Mining. All 81 acres or 1,350,000 tons of inferred slate reserves of commercial value would be open for excavation subject to mitigating

measures. Flexibility to mine an estimated 100 tons of slate per year throughout the 10-claim area would be available pending BLM approval of a plan of operations and adequate bonding for reclamation purposes.

All Wilderness Alternative

Effects on Wilderness Values. Designation of the area would guarantee the long-term preservation of its wilderness values (naturalness, solitude, primitive recreation and supplemental values). Impacts associated with slate excavation would not occur in the wilderness area.

Effects on Decorative Stone Mining. The 25 acres or 420,000 tons of commercial slate reserves within the wilderness area would be permanently closed to all mining activities. Slate excavation would be limited to the 56-acre area located outside the designated wilderness. The effects of this action on long-term slate production are not considered significant since inferred reserves within the 56-acre area are estimated at 930,000 tons. At an excavation rate of 100 tons per year, this area would have a mining life span of 9,300 years. In addition, these reserves are high in quality and are close to the powerline maintenance road.

Sheep Creek WSA

No Wilderness Alternative (Proposed Action)

Effects on Wilderness Values. Selection of the No Wilderness alternative (ACEC Management) will not subject the wilderness values of the 3,967-acre area to any significant degradation. No impairing actions are foreseeable under ACEC management that differ from those projected under wilderness management. Despite the absence of long-term wilderness preservation, no impairment is anticipated to the area's wilderness values of naturalness, solitude, primitive recreation or supplemental values.

All Wilderness Alternative

Effects on Wilderness Values. Designation would ensure long-term preservation of the area's wilderness values (naturalness, solitude, primitive recreation and supplemental features.) No management actions are foreseen that would diminish these values.

CHAPTER 5

CONSULTATION, COORDINATION, AND PUBLIC INVOLVEMENT

ISSUE IDENTIFICATION

The Sleeping Giant WSA (6,112 acres) was established through an intensive wilderness inventory in October 1981 following the completion of the Sleeping Giant land exchange. The land exchange environmental assessment considered the following issues: climate, air quality, topography and geology, soils, water, vegetation, wildlife, pre-historic and historic features, aesthetics, recreation, social conditions, economic conditions, and land uses.

The existence of privately owned subsurface minerals and lands acquired after the passage of FLPMA (1976) were BLM concerns during the early stages of the wilderness review process. In 1982, two administrative decisions were released dictating that areas possessing these characteristics could not be reviewed for wilderness and therefore the Sleeping Giant WSA was dropped from further wilderness review.

As a result of these decisions, other alternative management options were analyzed in the Headwaters RMP in 1983. The current 11,609-acre Sleeping Giant ACEC was administratively designated through the Headwaters RMP record of decision in July 1984. The issues analyzed in the RMP/EIS were oil and gas leasing and development, forest management, land ownership adjustment, mineral exploration and development, motorcycle use, motorized vehicle access, utility corridors, and special designations.

The Sleeping Giant WSA was reinstated in 1985, due to administrative decision reversals regarding the foregoing land status issues. A second intensive wilderness inventory was conducted on all adjoining BLM lands which included parcels acquired after 1981. Through this wilderness inventory, the two existing WSAs were established in June 1988.

A federal Register Notice published on June 23, 1988, announced the beginning of the wilderness study for the Sleeping Giant and Sheep Creek WSAs. Issue identification for this EIS continued into August 1988 when an issue scoping document was mailed to 170 organizations, businesses and individuals. This public mailing outlined a tentative list of issues and requested comments. Thirty-seven responses were received. The issue document and comment analysis can be found in Appendix A.

Numerous public involvement actions have occurred during this wilderness review process. See Table 5-1.

CONSULTATION AND COORDINATION

BLM-managed lands throughout the state of Montana were exchanged for privately owned lands in the Sleeping

Giant area. The consolidation of public lands in the Sleeping Giant area eventually led to wilderness consideration. In 1979, the Montana Board of Land Commissioners gave a finding of fact on the Sleeping Giant Exchange environmental assessment. In developing this finding of fact, the board held public hearings in Helena on May 23, 1979; in Great Falls on May 24, 1979; and in Terry on May 29, 1979. Taking part were six groups: the Wildlife Federation, the Wilderness Society, the R and M Recreation Company, the Prairie County Cooperative Grazing District, the Prairie County Conservation District, and the Montana Department of Fish, Wildlife and Parks. The Land Board found that the exchange was of overall benefit to the people of Montana and the school trust.

In 1983, the Lewis and Clark County Board of Commissioners in a comment letter to the Headwaters RMP endorsed the Sleeping Giant land exchange program and designations to protect environmental values. The information contained in the Lewis and Clark County Comprehensive Plan of 1983 has been used to complete the EIS.

In 1984, a biological assessment of the Headwaters RMP was prepared. The Section 7 consultation #6-1-84-F-005 gave a biological opinion that implementation of the preferred alternative of the RMP is likely to have beneficial effects on bald eagles and peregrine falcons. The RMP established the Sleeping Giant ACEC.

The 1985 Management Plan for the Beartooth Wildlife Management Area (which lies just east of the Sleeping Giant ACEC) was prepared by the Montana Department of Fish, Wildlife and Parks. The wildlife biologists have released five peregrine falcons from a hack site near the Missouri River. They also monitor summer resident bald eagles but have not discovered any nests. Coordination of wildlife habitat management for these birds and big game is ongoing.

The 1986 Helena Forest Plan established a management plan for the Gates-of-the-Mountains Wilderness Area south-east of the Sleeping Giant ACEC. The plan also recommended enlarging the wilderness area to include Forest Service lands in the adjoining Big Log Roadless Area. Coordination management of wilderness values for both areas is ongoing.

Under the powersite withdrawal for Holter Lake all federal actions affecting the shoreline must be coordinated with the holders of the Federal Power Commission license, the Montana Power Company.

DISTRIBUTION

The following federal, state, and local entities will receive a copy of the Sleeping Giant and Sheep Creek Wilderness Study/EIS.

TABLE 5-1
PUBLIC INVOLVEMENT

Date	Action	Purpose
June 1979	Public Comment Period	Comments taken on Sleeping Giant Land Exchange
September 1979	Federal Register Notice	Final initial inventory completed for Sleeping Giant
July 1981	Federal Register Notice	Beginning of intensive inventory for Sleeping Giant
August 1981	Public Meeting in Helena	Intensive inventory recommendations and request for comments
October 1981	Federal Register Notice	Final inventory decision to designate Sleeping Giant (6,112 acres) as a WSA and to conduct study through the Headwaters RMP
January 1983	Federal Register Notice	Sleeping Giant removed from wilderness study
June 1983	Public Hearing in Helena	Comments taken on Headwaters Draft RMP
July 1983	Public Comment Period	Comments taken on Headwaters Draft RMP
April 1984	Federal Register Notice	Notice of ACEC designation for Sleeping Giant
December 1987	Federal Register Notice	Proposed wilderness inventory decisions for Jackson Peak Add-on and Sheep Creek Unit
January 1988	Public Meetings in Helena and Great Falls	Explain wilderness inventory recommendations and request public comment
March 1988	Federal Register Notice	Final proposed decision to designate Sheep Creek and Jackson Peak Add-on as WSAs
March 1988	Meeting with Montana Power Company representatives	Intent to protest inventory decisions
June 1988	Federal Register Notice	Notice to begin wilderness study of the Sleeping Giant and Sheep Creek WSAs
July 1988	Feature article in Helena Independent Record	Present maps, issues and wilderness study procedures for the Sleeping Giant and Sheep Creek WSAs
August 1988	Public mailing of issue document	Request issue identification comments

Federal Agencies

Army Corps of Engineers
 Bonneville Power Association
 Department of Agriculture
 Forest Service, Region 1
 Helena National Forest
 Soil Conservation Service
 Department of Air Force
 Department of Energy
 Department of Housing and Urban Development
 Department of Interior
 Bureau of Indian Affairs

Bureau of Mines
 Bureau of Reclamation
 Fish and Wildlife Service
 Geological Survey
 Mineral Management Service
 National Park Service
 Department of Transportation
 Environmental Protection Agency
 Federal Energy Regulatory Commission
 Nuclear Regulatory Commission

Congressional

Representative Pat Williams
Representative Ron Marlenee
Senator Conrad Burns
Senator Max Baucus

State Agencies

Governor, State of Montana
Montana Department of Agriculture
Montana Department of Commerce
Montana Department of Fish, Wildlife and Parks
Montana Department of Health and Environmental Sciences
Montana Department of Livestock
Montana Department of Natural Resources and Conservation
Montana Department of State Lands
Montana Environmental Quality Council
Montana State Library
Montana State Clearinghouse
Montana State University
University of Montana

Local Agencies

Lewis and Clark County Commissioners
Great Falls Public Library
Helena Planning Office
Lewis and Clark Library

Organizations

American Association of University Women
American Public Land Exchange
American Wilderness Alliance
Defenders of Wildlife
Ducks Unlimited
League of Women Voters
Last Chance Audubon
Last Chance Back Country Horsemen
Montana Association of Counties
Montana Association of Grazing Districts
Montana Audubon Council
Montana Cattlemen Association
Montana Environmental Information Center
Montana Farmers Union
Montana Mining Association
Montana Outfitters and Guide Association
Montana Petroleum Association
Montana Public Lands Council
Montana Snowmobile Association
Montana Oil and Gas Commission
Montana Stockgrowers Association
Montana Trail Bike Riders
Montana Wilderness Association
Montana Wildlife Association
Montana Woolgrowers Association
National Wildlife Federation
Nature Conservancy
Northern Plains Resource Council
Northwest Citizens for Wilderness
Sierra Club
Skyline Sportsmen Association
Trail Riders

Western Environmental Trade Association
Wilderness Society
Wildlands Resources Association

Businesses

Amoco Production Co.
Atlantic Richfield Co.
Boat Loft Inc.
Chevron USA Inc.
Conoco Inc.
D.A. Davidson & Co.
Great Falls Tribune
Montana Power Co.
Sieben Ranch

Others

Copies of this draft wilderness study and environmental impact statement will be sent to all individuals who responded to the issues brochure and to the media. Grazing lessees and other affected public land users will also receive a copy of the draft.

LIST OF PREPARERS

Project Management

Brad Rixford served as the project manager, writer and specialist for wilderness/recreation. His qualifications include experience as the project manager for the Headwaters Wilderness Study/EIS, and as interdisciplinary team member for the Headwaters RMP/EIS. He has been an outdoor recreation planner and natural resource specialist with the BLM for ten years. He has a B.S. in Outdoor Recreation from the University of Vermont.

Interdisciplinary Team

Bob Rodman served as the team specialist for land-related actions. His qualifications include experience as interdisciplinary team member for the Headwaters RMP/EIS. He has been a realty specialist with the BLM for nine years. He has a B.S. in Biology from the University of Utah.

Sandy Brooks served as the team specialist for range management. She has been a range conservationist with the BLM for five years. She has a B.S. in Range/Forest Management from Colorado State University.

David Williams served as the team specialist for minerals and energy. His qualifications include experience as interdisciplinary team member for the Centennials Wilderness Study/EIS, the Headwaters Wilderness Study/EIS, and the Headwaters RMP/EIS. He has been a geologist with the BLM for ten years. He has a B.S. in Geology from Bates College and an M.S. in Metamorphic and Igneous Petrology from the University of Montana.

David Lomas served as the team specialist for watershed resources. His qualifications include experience as an interdisciplinary team member on the Headwaters RMP/EIS and the Mountain Foothills EIS. He was a hydrologist with the BLM for ten years. He has a B.S. in Forestry from Michigan Technological University and an M.S. in Watershed Science from Utah State University.

Larry Rau served as the team specialist for wildlife and plant resources. He has been a range conservationist and wildlife biologist with the BLM for ten years. He has a B.S. in Range Management from Washington State University.

Jerry Clark served as the specialist for cultural resources. His qualifications include experience as an interdisciplinary team member for the South Dakota RMP/EIS, the Billings RMP/EIS, and the Terry Badlands Wilderness EIS. He has been a cultural resource specialist with the BLM for 13 years. He has a B.A. in Anthropology from the University of Montana and an M.A. in Anthropology from Washington State University.

DOCUMENT PRODUCTION TEAM

The Sleeping Giant and Sheep Creek Wilderness Study and EIS was produced by the Butte District and the Montana State Office. Table 5-2 lists the production team members and their function.

TABLE 5-2
DOCUMENT PRODUCTION TEAM

Function	Name	Office
Writer/Editor	Brad Rixford	Resource Area
Writer/Editor	Carole Mackin	District
Environmental Coord.	Jerry Gill	District
Word Processor	Delores Vavas	District
Typesetting/Layout	Printing and Graphics	State
Illustrator	Printing and Graphics	State
Offset Photographer	Printing and Graphics	State
Cartographer Tech.	Printing and Graphics	State
Printing Specialist	Printing and Graphics	State

APPENDIX A

PUBLIC COMMENT ON ISSUE BROCHURE

In August 1988 the Bureau of Land Management released an information and issue brochure announcing the start of the Sleeping Giant and Sheep Creek Wilderness Study/EIS. The brochure listed a number of preliminary issues to begin the study, requested public comment on those and other issues, and asked for information to update the mailing list. The following lists the issues as they appeared in the brochure.

THE IDENTIFICATION OF ISSUES

Proper issue identification is vital to the planning process. Solutions arrived at through planning mean little if they are solutions to the wrong or nonexistent problems.

The section that follows outlines a set of tentative issues we have assembled based on current management policy, communications with the public and the ideas of our own resource specialists. We need to know if you agree with us. The issues are not listed in any particular order of importance.

Given the small size of both the Sleeping Giant and Sheep Creek WSAs only two alternatives are tentatively planned for study analysis. The no wilderness alternative, or continuation of ACEC management, and the all wilderness alternative will have many similarities for both designations are oriented toward resource protection. One major difference is that ACEC designations are administrative decisions made through the Resource Management Planning Process while wilderness designations are legislative decisions and can be revised only by Congressional action.

We are asking you to use the enclosed response form and tell us if they are the issues most important to you, and also if there are any we failed to mention.

ISSUE: WILDLIFE

The study areas provide habitat for a variety of wildlife populations. Species that are of special concern in this study include bald eagles, mountain goats, and bighorn sheep.

Are there other wildlife species found in the study areas that merit special concern?

How will wilderness designation affect these principal wildlife species?

What types of wildlife improvement efforts are needed in the foreseeable future to enhance habitat conditions and how will these improvements be influenced by a wilderness vs. an ACEC designation?

ISSUE: RECREATION

People use the Sleeping Giant and Sheep Creek area for numerous outdoor recreation activities such as camping, fishing, hunting, nature study and photography, backpacking and horseback riding. The location and terrain have excluded motorized recreation.

Are there other recreational uses occurring within the study areas?

How will these activities be affected by wilderness designation?

ISSUE: RANGE

Most of the study areas are grazed by livestock. Although wilderness designation may restrict range improvements and increases in authorized grazing use, it will not eliminate grazing use. An ACEC designation enables greater management opportunities.

What type of range improvements are needed in the study areas?

Would they be compatible with wilderness designation?

ISSUE: CULTURAL RESOURCES

An abandoned homestead of historical and aesthetic importance exists within the area. Structures associated with this homestead include a three-room framed house, a log cabin, a barn, an outhouse, and a storage shed. These buildings are an important cultural feature and should be preserved.

What actions are needed to stabilize and protect this cultural feature?

Would they be compatible with wilderness designation?

ISSUE: WILDERNESS

Inventory of the two WSAs was completed in June 1988 and both areas were determined to possess wilderness characteristics. These qualities are size, naturalness, solitude and primitive recreation opportunities. The area was designated as an Area of Critical Environmental Concern through the Headwaters Resource Management Plan in 1984.

Should the study areas be designated wilderness or should they remain as an ACEC?

What effects will each designation have on the existing wilderness characteristics?

ISSUE: MINERALS AND ENERGY

Ten placer claims for decorative stone totaling 200 acres, exist within Towhead Gulch. The entire area is also leased for oil and gas. Energy potential is considered to be moderate to high. It is not known at this time if commercial reserves are present.

In addition, approximately 43 percent of the area's mineral rights are privately owned. This means that the Bureau of Land Management could not deny entry or prevent surface impacts associated with exploration and development of these mineral and energy resources.

On those lands where BLM owns the mineral rights, what effect will wilderness designation have on the above resources?

Can the wilderness values of these study areas that have scattered parcels of mineral rights in private ownership, be protected by wilderness designation in perpetuity?

How significant are the slate deposits in Section 8 and what is the potential for increased development?

What is the potential of finding commercial reserves of either oil or gas?

What is the likelihood of exploration and development?

ISSUE: UTILITY CORRIDORS

A 100 KV powerline presently bisects the two WSAs. The lands associated with the 40-foot right-of-way and adjacent

maintenance road have been excluded from study consideration. This utility right-of-way grant is effective until the year 2018.

What is the future need for this utility line?

How will any improvement and maintenance needs be affected by wilderness vs ACEC management?

ISSUE: ECONOMICS

Local economics currently depend upon grazing, minerals, oil and gas, and recreation. Some of these economically important resources may be heavily restricted while others may be enhanced.

What are the positive and negative effects of wilderness designation to the local economics?

Do these differ significantly from the effects of ACEC designation?

RESPONDENT DATA

A total of 37 responses to the issue-identification brochure were received. Of those respondents, 24 were interested citizens, 5 were representatives of businesses, 3 represented environmental organizations, 2 each were from federal and state agencies, and 2 were from local libraries. Two-thirds of the responses came from Lewis & Clark County and most of the rest came from elsewhere in Montana. Table A summarizes the issue responses by category.

TABLE A
SUMMARY OF ISSUE RELATED RESPONSES

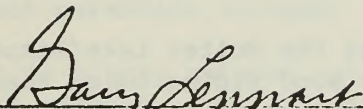
Category	Issue	# of Responses
Energy & Minerals	Existing rights of oil and gas leaseholders	1
	Oil and gas leasing	2
	Expansion of slate mining	1
	Manageability of private mineral rights	2
	Purchase of private minerals	1
	Directional drilling	1
Boundary Adjustments	Acquisition of adjoining land	2
Powerline	Possibility of relocation	3
	Line maintenance	3
	Use of other existing lines	1
Cultural	Significance of homestead	1
	Future management of homestead	1
Recreation	Use of mountain bikes	1
	Hiking opportunities and trails	2
	Use levels and activities	2
	Use of 4X4 motorized vehicles	1

Water	Water quality	1
	Reservoir management	1
Wilderness	Long-term protection of values	4
	Management under wilderness designation	1
Livestock Grazing	Effect of designation on grazing	1
	Elimination/reduction of grazing	2
	Maintenance of existing improvements	1
Wildlife	Effects on mule deer, elk and black bear	1
	Designation effects on wildlife species	1
Soils	Shoreline erosion abatement	1
Plants	Effects on threatened and endangered species	1
Economics	Designation effects on local economy	1

APPENDIX B
SLEEPING GIANT ACEC
MANAGEMENT PLAN

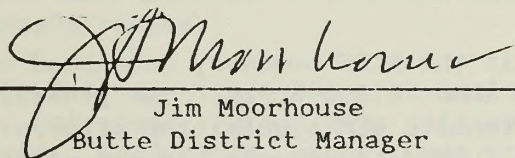
SLEEPING GIANT
ACEC
MANAGEMENT PLAN

Recommended by:


Gary Leppart
Headwaters Resource Area Manager

12/28/88
Date

Approved by:


Jim Moorhouse
Butte District Manager

12.28.88
Date

Introduction

This document provides management guidance for the Sleeping Giant Area of Critical Environmental Concern (ACEC). The area was nominated and evaluated through the Bureau planning process in the Headwaters Resource Management Plan (RMP). Formal designation was established in July, 1984 when the State Director of Montana signed the Record of Decision for the Headwaters RMP. All of the management actions presented are consistent with the general guidance decisions made in the RMP. This ACEC management plan will remain in effect until the next resource area planning cycle unless a congressional wilderness designation supercedes it. During this period an evaluation of the ACEC plan should be conducted and if needed modifications should be made to meet plan objectives.

Size

The total size of the area is 11,609 acres. See attached ACEC boundary map (Attachment 1).

Location

The ACEC is located in Lewis & Clark County within portions of Townships 13 and 14 North and Ranges 3 and 4 West immediately west of Holter Lake and the Missouri River. Helena is approximately 25 miles south while Great Falls is some 60 miles to the northwest. The Beartooth Ranch State Game Range is located immediately across the river and the U.S. Forest Service Gates of the Mountains Wilderness Area is located 1 mile southeast of the ACEC; and the Gates of the Mountains Game preserve is located immediately south. Approximately 120 acres of BLM ACEC land in the east half of Section 13, T. 13 N., R. 3 W. and within the Game Preserve.

Public access is available by boat along the Holter Lake/Missouri River shoreline as well as by vehicle via the Wood Siding Gulch Road which terminates on BLM land near the west boundary of the ACEC.

Background

Initially, the land pattern within the ACEC boundary consisted of scattered parcels of public land totalling about 6,800 acres. The present land pattern has been consolidated through extensive BLM acquisition efforts which involved Land and Water Conservation Fund (L&WCF) purchases and two major land exchanges. For further information refer to the Sleeping Giant Land Exchange (1971-1981) and the Binion-Babcock Exchange (1982).

The primary objective for acquiring public lands in this area was to consolidate a manageable area so that the high scenic, recreational and wildlife values could be preserved for public enjoyment and use. This acquisition effort has resulted in approximately 11 miles of public shoreline and adding the entire geologic formation which resembles the profile of a Sleeping Giant to public ownership.

Land Ownership

Surface ownership of the ACEC is entirely federal and under BLM management. Approximately 5,000 acres or 43 percent of the area's sub-surface is not controlled by BLM. There are six private parties that own all of the minerals within 2,800 acres and the oil and gas interests on an additional 2,200 acres. A proposal was included in the FY90 budget request to purchase these mineral interests with L&WCF money. If this fails, consideration should be given to exchange for the mineral ownership within the ACEC boundary using lands outside this ACEC.

Primary Values

The Sleeping Giant ACEC is characterized by steep, irregular topography ranging in elevation from 3600 feet along Holter Lake to 6,792 feet at the summit of Beartooth Mountain. Approximately 50 percent of the area is covered with mixed conifers including ponderosa, limber and lodgepole pine and douglas fir. Cottonwoods and deciduous shrubs are associated with numerous riparian areas within the area.

The non-forested portions are comprised of sedimentary rock ledges, talus slopes, and native grasslands consisting primarily of bluebunch wheatgrass, Idaho fescue and forbs. The most outstanding feature or landmark of the area is the Sleeping Giant; a formation created by the profile of the Beartooth Mountain and the rock outcroppings of the lower ridgeline that extends towards the Missouri River. This feature trends east-west through the southern portion of the ACEC.

The primary drainages within the area are Rose Gulch, Sheep Creek, Falls Gulch, Towhead Gulch and Beartooth Creek. Watershed values are high, and there are 6 important perennial streams.

The overall terrain is highly natural providing outstanding scenic values within the area. In addition, the off-site vistas of the surrounding landscape is outstanding, with views of the Missouri River, Beartooth Game Range, the Gates of the Mountains Wilderness Area and numerous distant views of panoramic mountain ranges.

Important wildlife species within the area include bighorn sheep, mountain goats, elk, bear, mule deer, furbearers, cold water fisheries, (particularly trout), Canada geese, bald eagle, osprey, and other raptors. Recreation opportunities are diverse and include fishing, camping, hiking, horse travel, hunting, nature study, photography, and snowshoeing. An abandoned homestead consisting of a cabin, framed house, barn, outhouse, shed and root cellar exists within the area.

Other important values include 11 miles of Holter Lake/Missouri River shoreline and the presence of the nationally significant Lewis & Clark trail.

Management Objectives

1. Preserve the natural resource values and protect against undue and unnecessary degradation.

2. Preserve the high scenic and visual qualities by ensuring that all management actions comply with the VRM Class II guidelines. See visual management section on page 5.
3. Provide for a wide variety of primitive recreational opportunities that include fishing, camping, hiking, hunting, trapping, horse travel, nature study, and photography in a manner that best ensures public safety and health, resource protection and quality of experience.
4. Preserve, protect and promote wildlife and its habitat for the associated "key" species of elk, mountain goats, bighorn sheep, osprey, bald eagles, peregrine falcons, waterfowl, and cold water fisheries in accordance with the overall management objectives of the ACEC.

Management and Use Constraints

1. Oil and Gas. Approximately 2,680 acres of federal sub-surface are currently under lease. Although potential for oil and gas deposits within the ACEC is moderate to high, the likelihood of a commercial discovery is considered to be low.

The area will continue to be closed to surface occupancy on all BLM estate where the surface and sub-surface are both public domain. Oil and gas exploration and development of private sub-surface may proceed, but will be mitigated on a case by case basis to the extent possible in order to meet the objectives of this plan.

2. Other Minerals. There are 10 placer claims totalling 200 acres in NW1/4SW1/4 and the NW1/4 of Section 8, R3W, T13N. Mineral potential is considered very low for all minerals except slate. Deposits of this building stone are known to exist only in Towhead Gulch.

Although the potential is very low, locatable and leasable minerals will remain open to all forms of mineral entry except mineral material sales and other disposals under 43 CFR 3600. An approved plan of operations will be required prior to any entry on ACEC lands and an adequate bond required to mitigate projected impacts. Authorized mining activities shall not create unnecessary or undue degradation of the resources; motorized equipment shall be limited to the minimum required; and reclamation measures will require restoration of the disturbed land to a condition that is unobtrusive and as close to its original state as possible.

3. Forestry. All forested lands will continue to be set aside from timber harvest and management. Cutting of trees will only be allowed for valid mining claims, emergency fire suppression, and administrative purposes where authorized improvements to preserve or enhance the objectives of the plan are needed and cannot be reasonably obtained from outside sources. Such cutting within the ACEC shall be conducted away from trails or campsites, and all evidence of cutting reduced to a condition which is unobtrusive to visitors.

Insect and disease control efforts. will not be allowed unless it is needed to protect outside resources or when the loss is significant enough to threaten the management objectives of this plan. Suppression projects will be limited to actions which have the least adverse impact on the natural resources.

Reforestation may be allowed in cases where natural revegetation is inadequate to prevent deterioration of the area's resources or to enhance the primary values of the area. Replanting will be limited to native species and hand labor unless large scale natural disasters occur and motorized equipment proves more practical.

4. Lands. All BLM lands within the ACEC boundary will be retained in BLM ownership. Priority acquisitions needed to enhance the overall values, opportunities and management of the area include all nonfederal sub-surface minerals within the ACEC as well as the following adjoining lands (surface and sub-surface):

T14N, R4W:

Section 26; E1/2W1/2, SE1/4NE1/4
Section 23; E1/2; SW1/4
Section 24; All Private
Section 13; S1/2

T14N, R3W:

Section 19; All
Section 20; All
Section 21; W1/2

T13N, R4W:

Section 1; All

T13N, R3W:

Section 5; All
Section 7; All

In addition to these priority land acquisitions there are two easements that should be acquired which would improve public access to the ACEC as well as promote better visitor distribution within the area. The first easement is along Sheep Creek in Section 14, R4W, T14N, where a road already exists. The second easement is along the Montana Power Company powerline road which leads to the mouth of Towhead Gulch. This easement involves the construction of about .5 miles of road as well as about one mile of hiking trail up the southwest face of Beartooth Mountain in Section 17, R3W, T13N. Both vehicle routes would terminate at trailheads outside the ACEC boundary from which only foot access would be allowed. In addition, administrative access should be obtained up the drainages of Falls Gulch and Towhead Gulch to enhance long-term manageability.

Motorized Access. The entire ACEC will be closed to all motorized vehicles and equipment. A yearlong closure with locked gates will be established at both boundaries of the Falls/Towhead Gulch road. Exceptions to this area closure will be granted for:

- o Access needed to perform valid and authorized mineral operations.
- o Emergency operations in response to situations that threaten the health and safety of people or resources both within the ACEC and on adjoining private lands. Examples are fire suppression, search and rescue missions, etc.
- o Livestock management operations and project improvements that cannot be reasonably accomplished by horseback.
- o Maintenance and improvements associated with the existing MPC powerline and maintenance road in Towhead and Falls Gulches.
- o Authorized activities needed to enhance and preserve plan objectives or to carry out temporary scientific and educational endeavors. Examples include an archaeological excavation of an important or threatened site; chainsaw cutting of selective trees to clear a section of hiking trail or improve fishery habitat, prescribed burns needed to improve/restore habitat conditions, etc.
- o Temporary aircraft landing for authorized activities.
- o Beaching of motor boats along the shoreline.

Visual Resources. In order to protect the high scenic and visual qualities of the ACEC, a Class II VRM rating has been assigned to the area. All future developments, barring grandfathered and existing rights will comply with the objectives and guidelines of this classification. The primary objective of this rating is to retain the existing character of the landscape. Changes to the terrain should have low visual impact. Management activities may be seen, but should not attract the attention of the casual user. Changes in any of the basic elements (form, line, color, texture) affected by an approved activity should not be evident in the characteristic landscape as a whole. Temporary impacts may be allowed, provided they are of short duration.

Utility Corridors. Approval of new transmission line corridors shall be avoided and only allowed after all other options have been exhausted. The Falls/Towhead Gulch powerline will continue to be operated and maintained by MPC. The total width of this right-of-way is 40 feet and is not scheduled for renewal until 2018.

The MPC will be allowed to perform needed maintenance of this line in the future. Major improvements will require an amendment of the existing right-of-way and approval will be subject to the Montana Major Facility Siting Act as well as BLM multiple use management. Improvements shall be mitigated so that the objectives of ACEC management are not significantly impacted.

Livestock Grazing: Two grazing allotments blanket the entire ACEC. The Sheep Creek allotment is leased to Phil Wirth and has been placed in a maintenance category: this means that no significant problems/conflicts were identified that involved livestock grazing management. This allotment is comprised of 440 acres of public ACEC land and has an associated grazing capacity of 15 federal AUMs.

The Oxbow allotment is leased to Tim Babcock and has been placed in an Improvement category: this means that significant problems/conflicts were identified relative to livestock grazing and a grazing management plan will be initiated to improve resource conditions. It totals about 11,000 acres of ACEC land and has an authorized grazing capacity of 376 federal AUMs. All suitable lands are actively being grazed with the exception of the Ming Bar parcels in sections 13 and 14 which are permanently deferred.

Livestock grazing will continue as guided by the current Oxbow AMP. Future management will be adjusted to conform with the AMP evaluation which is scheduled for completion in 1989. This evaluation will address the objectives and recommendations presented in this ACEC plan. Increases in livestock numbers or AUM allocations will not be permitted. All maintenance and construction of improvements needed to manage and implement the oxbow AMP will be subject to plan objectives, motorized vehicle and equipment restrictions, Interim Management Policy (IMP) guidelines for lands under wilderness review and the VRM Class II guidelines.

Use of motorized vehicles will be allowed on a 'case-by-case' basis to perform livestock management activities that exceed the practical and reasonable limits of horse or foot usage. Allowable uses include emergency feeding; retrieval of sick cattle; fence and spring construction projects where heavy materials need to be transported. Routine allotment supervision and maintenance of developments will be conducted on foot or horseback.

Livestock grazing in portions of the Oxbow allotment has impacted important resource values within the ACEC. The primary reason is due to the area's steep terrain which restricts cattle movement throughout the allotment. As a result of this limiting characteristic, large numbers of cattle are concentrating in preferred areas for long durations. Heavy utilization in these areas has reduced vegetative composition and vigor both within riparian areas as well as on adjacent grassland benches. Other associated impacts include soil compaction, streambank and lakeshore erosion and decreased water absorption characteristics. The two areas needing immediate attention are the Falls Gulch drainage and the benchland extremity of the Jackson Peak peninsula. Other extensive impacts associated with cattle grazing include deterioration of campsite quality and direct conflicts with campers along the shoreline.

In order to correct some of these problems the Oxbow AMP was written and approved in 1986. Although implementation of this 3-pasture, rest rotation system will promote better cattle distribution it will not resolve visitor camping conflicts or concerns associated with the Jackson Peak peninsula. As a means to enhance the primary management objectives of this plan, the Oxbow AMP will be evaluated in 1989 with recommendations to eliminate or reduce shoreline grazing conflicts in mind. For more specific guidance see the ACEC related recommendations in the Oxbow AMP.

Recreation. The area provides opportunities for fishing, swimming, camping, hiking, horse travel, hunting, trapping, nature study, photography, and snowshoeing. These diverse opportunities will continue to be provided with the minimum amount of restrictions possible. Heavily used areas will be monitored to ensure against unnecessary and undue resource damage and wildlife disturbance. Visitor management techniques (both direct and indirect) will be utilized within the ACEC as needed to preserve both the resource values and the visitor's quality of experience and opportunities.

The construction of facilities and improvements such as trails, signs, fences, fire rings, chemical pit toilets, etc. will be provided only as required to preserve resource values, enhance the visitor's natural experience and to ensure the health and safety of people. Facilities and improvements will not be provided simply for the comfort and convenience of visitors.

Continuation, maintenance and removal of developments will be generally accomplished using primitive means. Motorized vehicles and equipment will only be used when other alternatives prove unreasonable and impractical.

Foot trails may be designed and built at some future date where needed to disperse visitor use, provide for safety, preserve resource values and enhance the quality of the user's experience. Access to the proposed and existing trail system will be limited to foot and horseback. Trail heads will be constructed near the boundaries of the ACEC to accommodate vehicle parking and to promote visitor disbursement.

Trail routes will be selected to provide users with a variety of scenery and resource opportunities including scenic vistas, wildlife observation points, vegetative screening, shade, stream reaches, etc. Trails should follow natural contours as much as possible, not be highly visible and create minimum disturbances to soil, ground cover and wildlife. Trail specifications and standards will be established in the project plan. Use of mountaineering bikes will not be allowed within the ACEC as they are mechanized devices not considered to be compatible with primitive forms of recreation. In addition, use would be heavily restricted given the area's vegetative and topographic characteristics.

Signing within the ACEC will be limited to that which is needed to inform users, enhance resource preservation awareness, provide for public safety, and regulate behavior. Foreseeable signs needed include:

- An interpretive sign will be installed at the Homestead site to enhance historical awareness.

- Boundary signs will be posted as needed.

- Trail markers will be installed at junctions.

-Trail head bulletin signs will display topographic maps of the ACEC with trails and regulations as required.

Camping along the shoreline and within the ACEC area will be allowed to continue unrestricted, provided resource conditions are not degraded beyond the limits of acceptable change. Campsites will remain as primitive as possible. These sites will be policed by the permanent seasonal at the Holter Lake Campground. A "pack-it-in, pack-it-out" concept will be promoted. Improvised camp structures, such as docks, will be removed when found.

Improvements to protect and enhance the resources may be installed/constructed on an as needed basis. Examples are chemical pit toilets, fire rings, terraced tent spots, native tree planting and fencing. Designated camping and stabilization improvements may be imposed if needed to prevent resource degradation from overuse. Firewood cutting will be limited to dead and down material.

No outfitter and guide hunting permits will be authorized within the ACEC given its limited size, relatively low populations of huntable wildlife species, lack of access and inability to adequately disperse hunters.

A bulletin board will be erected at the Holter Lake Campground with maps and pertinent information to educate the public about the management objectives and recreational opportunities available within the ACEC.

Cultural. The only known cultural site of importance is the homestead in Section 2, R3W, T13N. The site consists of a log cabin, framed house, barn, shed and root cellar. The structures will be protected from future livestock related degradation with a perimeter jack-leg and rail fence. An interpretive sign will be installed to educate the public and enhance historical awareness.

A feasibility study will be conducted at the homestead to decide if preservation/restoration work should be conducted and if so to what degree.

If other important sites are discovered, excavation may be permitted provided all disturbances are fully reclaimed. Motorized equipment and vehicles will be limited to that which is essential.

Wilderness. The majority of the ACEC is currently under wilderness review and therefore subject to IMP guidelines. Impairing actions will not be allowed unless grandfathered or valid existing rights prevail until a no wilderness designation is finalized by Congress or the State Office. Wilderness values will be preserved to the extent either IMP guidelines, or this ACEC management plan dictate.

Fish and Wildlife. The "key" wildlife species to be managed for include; mountain goat, bighorn sheep, elk, osprey, bald eagle, peregrine falcon, waterfowl and cold water fisheries. Management will strive to perpetuate a natural distribution, number and interaction of healthy indigenous species of fish and wildlife. Habitat manipulation and other human influences will be allowed to maintain desired populations of key wildlife species, promote threatened, endangered or sensitive species, enhance fishery habitat, control disease epidemics or other health hazards in which wildlife species are involved as carriers.

Hunting, fishing and trapping will continue subject to state and federal laws and regulations. The southeast extremity of the ACEC in the El/2, Sec. 13, R3W, T13N which is within the Gates of the Mountains Game Preserve will remain closed to hunting and fishing. Introduction of new exotics will not be permitted. Habitat improvement projects will be subject to VRM Class II guidelines, IMP guidelines and ACEC management objectives. The use of motorized vehicles will be restricted to the minimum amount essential to perform needed project work.

Habitat improvement projects may include exclosures, prescribed burns, native plant seeding, water source developments, etc. Riparian exclosures will be limited and allowed only in cases where alternatives in grazing management cannot be established to adequately protect resource values.

Fire. The general policy for the ACEC will be "active suppression" regardless of cause. Fire management modification will be considered when the Resource Area Fire Plan is written. During the interim all wild fires will be suppressed immediately upon notification. In order to minimize long-term environmental impacts, the use of motorized vehicles will be restricted unless required to save human life, off-site property or key wildlife habitat. All fire fighting efforts within the ACEC will be assigned a resource advisor from the Headwaters Resource Area.

All fire related structures shall be removed upon completion of use and the site rehabilitated so as natural a state as possible. All vegetative reseeding will be done with native species or tame ecotypes.

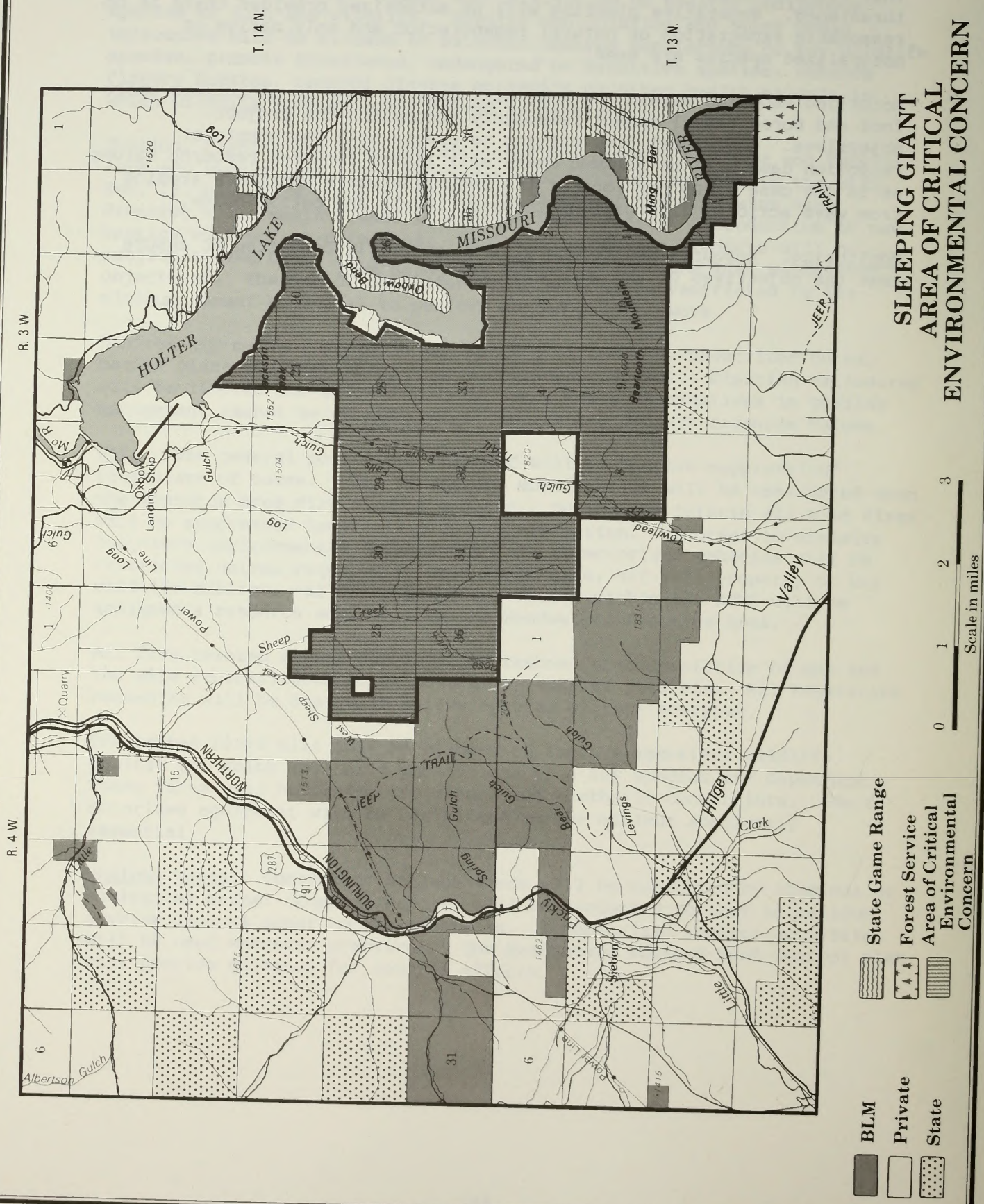
Prescribed fires will only be allowed to improve important wildlife habitat for which declining populations of a key species are dependent. These fires will be subject to visual and aesthetic constraints. Use of motorized equipment will be restricted to the minimum absolutely essential.

Noxious Weeds. Control of noxious weeds will be conducted by chemical or biological means. Control efforts will be conducted so that no serious adverse impacts occur to the resources. Nonmotorized control activities will be used wherever practical. The Headwaters Noxious Weed Control plan will provide guidance for control efforts.

Water and Soils. Watershed restoration may be undertaken where soils, vegetative cover and hydrologic conditions have deteriorated to the point that resource values both in and out of the ACEC are seriously threatened. Vegetative planting will be authorized provided there is no reasonable expectation of natural regeneration and only native or naturalized species are used.

Motorized vehicles within the ACEC will only be used in situations where foot and horse travel cannot reasonably accomplish the project objectives. Individual tree cutting to create soil catchments or retention dams will be allowed where soil losses threaten resource values as is the case along portions of the shoreline where banks are eroding from wave actions, fluctuations in water levels and cattle usage.

Monitoring. Resource monitoring will be routinely conducted to ensure that the objectives of the ACEC plan are being met.



APPENDIX C
WILDERNESS INVENTORIES

WILDERNESS INVENTORY
WILDERNESS SUMMARY SHEET

I. LOCATION

Inventory unit No. (area or island, grouping of areas or islands):

MT-075-111A

Areas/Island name: Sleeping Giant

District: Butte State: Montana

II. SUMMARY:

A. Results of wilderness characteristics analysis.

1. Does the area or island appear to be natural? X yes ___no
2. Does the area or island offer outstanding opportunities for solitude or a primitive and unconfined type recreation? X yes ___no
3. Does the area meet any of the size requirements? X yes ___no
4. Does the area or island have supplemental values? X yes ___no

B Resulting map.

Attach a map showing inventory unit, roads, area with possibility of returning to a natural state, and boundary of wilderness study area (WSA).

III. RECOMMENDATION

Check one:

___Area or island should be approved as a WSA.

___Area or island does not qualify for wilderness study.

X A portion of the area(s) or island(s) is approved as a WSA for further study and will be reported to the President. The restrictions imposed by Section 603 will no longer apply (reference to map) on the remainder of the area.

IV APPROVAL

A. District Manager: [Signature]

Date: August 6, 1981

B. State Director: [Signature]

Date: _____

WILDERNESS INTENSIVE INVENTORY
SLEEPING GIANT

Unit Number: MT-075-111
Unit Name: Sleeping Giant

I. SIZE

Narrative: The Sleeping Giant Unit originally consisted of eleven parcels of public land totaling 6,858 acres, as stated in the Situation Evaluation of September 1979. Since public ownership at that time was found not to comprise 5,000 acres or more of contiguous land, the area was removed from further wilderness review because it did not satisfy the required size criteria. The Situation Evaluation further explained that these lands would be subject to intensive inventory, along with any additional lands obtained through the consolidation efforts of the proposed land exchange.

As a result of the Sleeping Giant exchange completed in March 1981, the area now totals 12,576 acres of contiguous public land. This figure does not reflect the three inholdings of private land, which total 1,204 acres.

The unit is bounded on the north and south by private and state land, on the west by private land only, and on the east by private land and the Missouri River. It is directly southwest of Holter Lake, roughly midway between Helena and Great Falls.

Public access to the area is by boat along the 11 miles of river shoreline. Access into the unit from the north, west, and south can be achieved only through private roads with the consent of the landowner.

Three major boundary reductions were made during the intensive inventory. The first removed 1,460 acres of public land and 577 acres of inholdings in the southwest extremity of the unit when a narrow corridor (88 yards wide) was created between the overlapping corners of Sections 6 and 12 in T13N between R3W and R4W. The rationale for dropping the acreage was based on the lack of outstanding opportunities afforded to users through this narrow corridor.

The second reduction removed 4,465 acres of public land and two inholdings totaling 626 acres in the western portion of the unit. This land was removed because it comprised less than 5,000 acres and because a power line and its associated maintenance road bisect the area north and south (see photos 1 and 2).

These significant natural impacts enter the unit along Towhead Gulch in T13N, R3W, through Sections 8 and 5, and continue into T14N, R3W, through Sections 32 and 29, leaving the unit through Falls Gulch.

The third boundary change eliminated 539 acres of public land in the southeast portion of the unit, where a narrow finger extends outside the bulk of the area along the Missouri River. This narrow configuration does not offer outstanding opportunities to potential wilderness seekers because it lacks screening; consequently, these lands were removed. This finger of land is in Sections 13 and 14, T13N, R3W.

The result of these boundary changes is a reduction in the total size of the Sleeping Giant Unit to approximately 6,112 acres. The newly formed boundaries of the unit are as follows:

The western boundary coincides with the power line and its associated road right-of-way through Sections 29 and 32 until it meets private land in Section 5 in T13N, R3W. The boundary then follows around Section 5 until it rejoins the right-of-way in Section 8. It continues approximately 1/2 mile to the line between Sections 7 and 8, where it then proceeds 1/3 mile to the southwest corner of the unit.

The southern boundary extends eastward along the southern lines of Sections 8, 9, 10, and 11 to the Missouri River in T13N, R3W. The eastern boundary proceeds north along the shores of the river through Sections 11 and 2, T13N, R3W, and Sections 35, 26, and 34, T14N, R3W, to where it meets private land in the SE1/4 Section 34. From this point, the boundary, which coincides with that of private land, goes west across Section 34, then north along the line between Sections 33 and 34, and on through Section 27 to where it rejoins the river in T14N, R3W. The boundary continues northeast along the river shore through Sections 27 and 22, and around the peninsula in Section 23 of the northeast corner of the unit.

The northern boundary continues from the peninsula along the shore of Holter Lake through Section 22 to where it meets the line between Sections 21 and 22, T14N, R3W. From this point the border extends south along the above line, then east following the northern edges of Sections 28 and 29 to the power line and road right-of-way at the northwest corner.

SUMMARY: Does the area have at least 5,000 acres of contiguous land or fit one of the size exceptions specified on page 12 of the Wilderness Inventory Handbook?

/ X / Yes

/ / No

Signature: _____

Bradley R. Riffel

Date: _____

8/10/51

Signature: _____

Richard E. Howard

Date: _____

8/6/51

II. NATURALNESS

Narrative: The Sleeping Giant Unit is characterized by steep, irregular topography ranging in elevation from 3,578 feet along the Missouri River to 6,792 feet at the summit of Beartooth Mountain. The area is dominated by a north-south ridge and another, perpendicular east-west trending ridge. In this area are numerous steep and narrow U-shaped valleys leading down toward the river to the east, Falls Gulch to the north, Beartooth Creek to the south, and Towhead Gulch and Sheep Creek to the west (see photos 3, 4, 5, and 6).

The most outstanding feature of the area is the Sleeping Giant, a formation created by the profile of the Beartooth Mountain and the rock outcroppings of the lower ridgeline (see photos 7 and 8). This mountain range trends east-west through the southern portion of the unit.

Approximately 50% of the area is covered by stands of ponderosa pine, limber pine, Douglas-fir, and lodgepole pine, depending on aspect and elevation. The rest is characterized by ponderosa pine savannas, grasslands, rock outcroppings, and talus slopes (see photos 9, 10, 11, and 12).

The shoreline along Holter Lake and the upper Missouri River meanders for approximately 8-1/2 miles. Frontage lands vary from gentle, grassy slopes to rocky cliffs (see photos 13 and 14).

The revised boundary of the Sleeping Giant Unit encloses an area that is almost completely natural. At the summit of Beartooth Mountain there are four small prospect pits (see photo 15) and an "H" made of slate that appears to have been designed to be visible from the air (see photo 16). Neither of these features is very prominent or noticeable, and their impact is extremely small.

A nonfunctional fence line exists in the S1/2 of Section 22, T14N, R3W. It extends for approximately 1/2 mile and consists of fallen posts and missing wire. Its influence upon the area is marginal (see photo 17).

There is an old homestead with a cabin, a livestock barn, an outhouse, and a storage shed in the NE1/4 SW1/4 of Section 2, T13N, R3W (see photo 18). These buildings, which are in an unnamed drainage bottom among trees, are visible only from nearby; thus, the old homestead has little overall impact on the unit.

A few weathered stumps within some of the timbered stands suggest a small amount of past selective cutting. Because they are screened by encompassing vegetation, these stumps are only visible upon direct encounter.

Along the accessible shorelines of the river are numerous primitive campsites typified by a fire ring and flattened, grassy tent sites. The most significant campsite consists of three terraces that have been hand excavated for tent sites (see photos 19 and 20). These imprints, too, have little impact because of their low visibility.

Offsite impacts visible from various locations in the unit include boats and cottages along the river, as well as the lower line and its associated maintenance road. This right-of-way now forms the west boundary of the unit (see photos 21 and 1). In summary, the newly bounded Sleeping Giant Unit generally appears to have been affected by the forces of nature, with the imprints of human work essentially unnoticeable. It is an area where the earth and its community of life are substantially untrammelled by humans and their activities.

SUMMARY: Does the area or island generally appear to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable?

/ X / Yes

/ / No

Signature: Brentley Riffel

Date: 5/6/81

Signature: Richard E. Howard

Date: 5/6/81

III. OUTSTANDING OPPORTUNITIES FOR SOLITUDE OR PRIMITIVE AND UNCONFINED RECREATION

A. Solitude

Narrative: The steep, irregular topography and forested slopes provide outstanding opportunities for solitude. The many drainages provide numerous opportunities for visitors to avoid the sights and sounds of other visitors in the unit (see photos 14, 22, and 23). The Douglas-fir and lodgepole pine forests provide vegetative screening (photos 9 and 24), which helps to conceal visitors from one another and to muffle sounds.

There are enough drainages to help disperse visitors and to avoid any pronounced corridor effect. Cross-country travel along the ridges is also possible, and this further aids in dispersing visitors. The ponderosa pine savannas and open areas along the river (see photos 13 and 25) are also ideal for cross-country travel. Some outside sights and sounds have a minor impact on the opportunities for solitude in the unit--these are the private lands and summer home development in Sections 27 and 34 of T14N, R3W (see photos 21 and 26) and the sounds of motorboats on the Missouri River. Neither of these has a significant impact on the opportunities for solitude in the unit.

SUMMARY: Does the area have outstanding opportunities for solitude?

/ X / Yes

/ / No

Signature: Brendley R. Smith

Date: 8/6/81

Signature: Richard G. Ward

Date: 8/6/81

B. Primitive and Unconfined Recreation

Narrative: Because of the diverse physical characteristics of the unit, there are many opportunities for primitive and unconfined types of recreation. These activities range from winter sports such as snowshoeing and cross-country skiing to water-based activities such as fishing and swimming. Hunting, backpacking, hiking, and horse travel are available, as is nature study, particularly wildlife viewing. The shoreline provides numerous primitive campsites (see photo 19) that are used by river recreationists. While none of these activities is of outstanding quality by itself, the diverse activities combine to provide outstanding opportunities for primitive recreation as a whole.

SUMMARY: Does the area have outstanding opportunities for a primitive and unconfined type of recreation?

/ X / Yes

/ / No

Signature: Brendley R. Smith

Date: 8/6/81

Signature: Richard G. Ward

Date: 8/6/81

V. POSSIBILITY OF CERTAIN AREAS RETURNING TO A NATURAL CONDITION.

Narrative: Neither the power line nor the houses could feasibly be removed by hand labor. However, the power line has been excluded from the boundary and the houses do not have a significant impact. The vehicle way might return to a natural condition through natural processes, but only after a very long period of time. The prospect pits and the slate "H" on top of Beartooth Mountain could be returned to an essentially natural condition with the use of hand labor only. The homestead will continue to decay over time and will become less noticeable.

SUMMARY: If the area were to become a wilderness area, could the imprint of man's work be reduced either by natural processes or by hand labor to a level judged to be substantially unnoticeable?

/ X / Yes

/ / No

Signature:

Bradley R. Rignall

Date:

8/6/81

Signature:

Richard E. Ward

Date:

8/6/81

IV. SUPPLEMENTAL VALUES

Narrative: The dominant geological feature of this unit is the Sleeping Giant configuration formed by Beartooth Mountain and an adjacent westward mountain when viewed from the south (see photos 10 and 27).

The unit also provides the user with spectacular panoramic views of the Rocky Mountains, in particular the Gates of the Mountains Wilderness Area to the southeast (see photo 28) and the Missouri River to the east (see photo 29). In addition, there are populations of bighorn sheep, mountain goats, elk, deer, black bears, and ospreys that can be seen in the area (see photo 30).

SUMMARY: Does the area contain ecological, geological, or other features of scientific, educational, scenic, or historical value?

/ X / Yes

/ / No

Signature:

Bradley R. Rignall

Date:

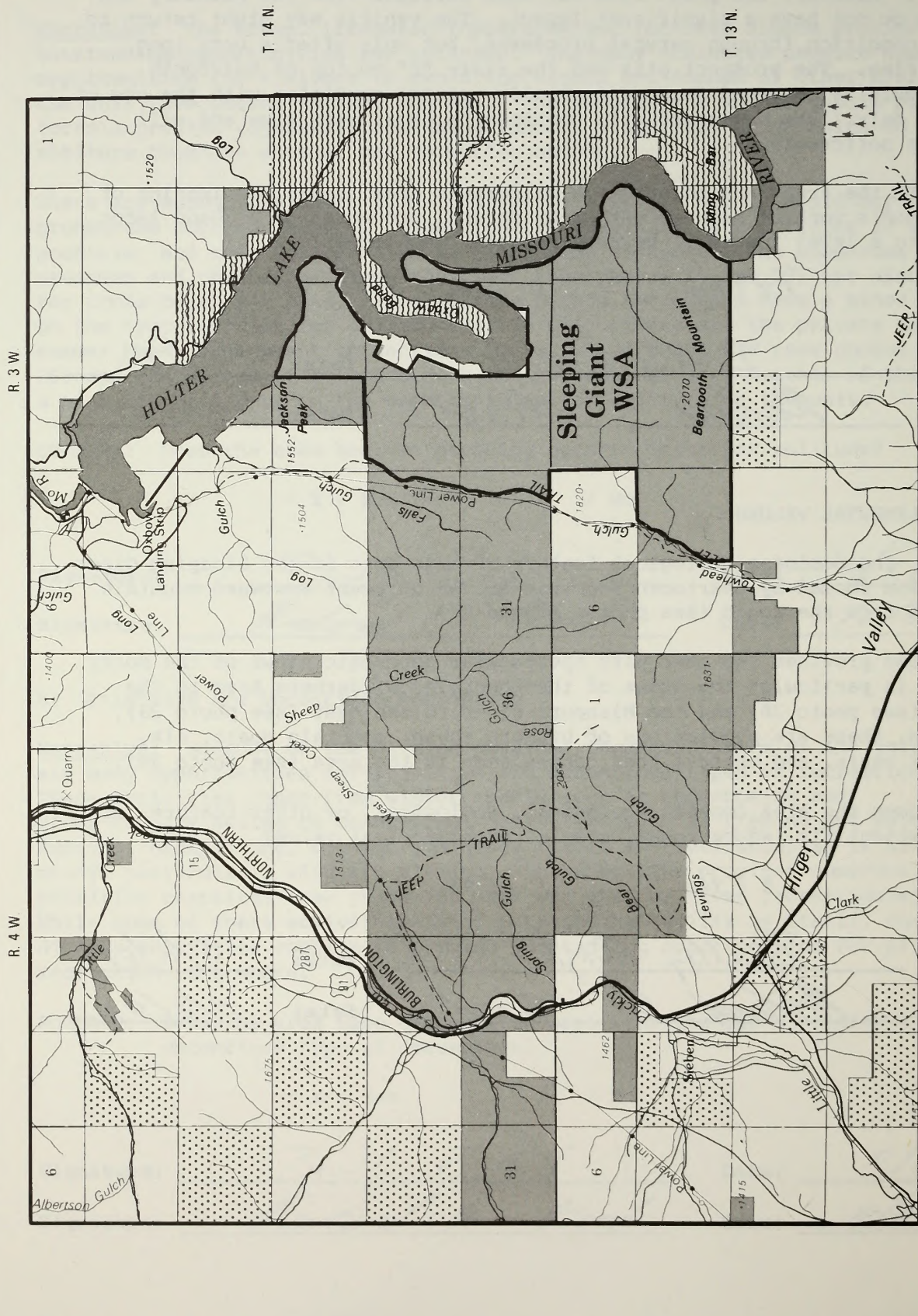
8/6/81

Signature:

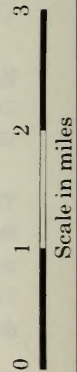
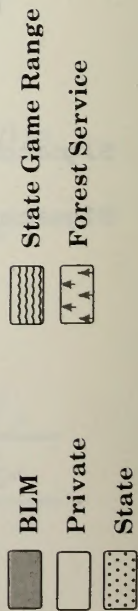
Richard E. Ward

Date:

8/6/81



SLEEPING GIANT WILDERNESS STUDY AREA. MT-075-111A



A
SECTION 202
FEDERAL LAND POLICY AND
MANAGEMENT ACT OF 1976 (FLPMA)

WILDERNESS INVENTORY
WILDERNESS SUMMARY SHEET

FINAL DECISION

I. LOCATION

Inventory unit No. (area or island, grouping of areas or islands):
MT-075-111A

Areas/Island name: Jackson Peak Add-on

District: Butte State: Montana

II. SUMMARY:

A. Results of wilderness characteristics analysis.

- | | |
|--|---------------------------|
| 1. Does the area or island appear to be natural? | <u>X</u> yes <u> </u> no |
| 2. Does the area or island offer outstanding opportunities for solitude or a primitive and unconfined type recreation? | <u>X</u> yes <u> </u> no |
| 3. Does the area meet any of the size requirements? | <u>X</u> yes <u> </u> no |
| 4. Does the area or island have supplemental values? | <u>X</u> yes <u> </u> no |

B. Resulting map.

Attach a map showing inventory unit, roads, area with possibility of returning to a natural state, and boundary of wilderness study area (WSA).

III. RECOMMENDATION

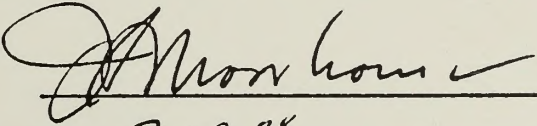
Check one:

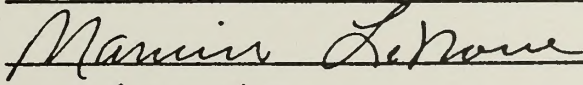
X Area or island is approved for inclusion to the Sleeping Giant WSA.

 Area or island does not qualify for wilderness study.

 A portion of the area(s) or island(s) is approved as a WSA for further study and will be reported to the President.

IV. APPROVAL

A. District Manager: 
Date: 2.10.88

B. State Director: 
Date: 2/26/88

Wilderness Intensive Inventory

Unit Number: MT-075-111A

Unit Name: Sleeping Giant (Jackson
Peak Add-on)

I. SIZE

Narrative: The Jackson Peak add-on to the Sleeping Giant WSA totals 375 acres. This area was acquired through the Binion-Babcock Land Exchange in 1982 and thereby gained eligibility for wilderness consideration after the original Sleeping Giant inventory was completed in 1981.

This unit is bounded on the east and south by public land, on the west by private land, and on the north by Holter Lake. It is located about two miles south of Holter Lake Dam. Helena is approximately 30 miles south while Great Falls is some 60 miles northeast. Public access to this add-on is available by boat along the Holter Lake shoreline as well as through the west portion of the Sleeping Giant ACEC via the Wood Siding Gulch Road.

Although the area does not stand by itself, its acreage, when added to the 6,112-acre, Sleeping Giant WSA, is of sufficient size to make practical its preservation and use in an unimpaired condition. The combined acreage of the two areas is now 6,487 acres. See the Jackson Peak add-on map.

Summary: Does the area have at least 5,000 acres of contiguous land or meet one of the size exceptions specified on page 12 of the Wilderness Inventory Handbook?

(X) YES

() NO

Signature

Bradley Rife

Date

11/18/87

II. NATURALNESS

Narrative: The Jackson Peak add-on is highly natural in character. The only sign of man's past presence is a crude telephone line strung between scattered trees bisecting the parcel. The line runs from private land in Section 27 to the Oxbow ranch area. It is no longer serviceable as it is cut and down along the Falls Gulch drainage.

This parcel consists of the east side of Jackson peak as well as a major ridgeline peak in the SE 1/4 of Section 21. Slopes throughout are quite steep averaging about 50 percent. Elevations vary from 3,600 feet along the shoreline of the lake to 4,897 feet at the highest peak.

Approximately half of the area is forested with ponderosa pine, limber pine and Douglas fir. The remaining land is represented by native grasses and scattered rock outcrops.

Numerous primitive campsites exist along the shoreline of the add-on unit. The site of most importance is located within a stand of Ponderosa pine in the southern extremity.

Distant views of the lake and surrounding landscape are very scenic overall despite the boat traffic and developments along the far shoreline. A view of the summer dwellings to the south in Sections 27 and 34 can also be noticed on occasion.

Summary: Does the area generally appear to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable?

(X) YES

() NO

Signature Brentley R. Rife

Date 11/18/87

III. OUTSTANDING OPPORTUNITIES FOR SOLITUDE OR PRIMITIVE AND UNCONFINED RECREATION

A. Solitude

Narrative: The Jackson Peak add-on in conjunction with the Sleeping Giant WSA provides outstanding opportunities for solitude. The vegetative and topographic screening within the northeast drainages enable visitors to experience a feeling of being alone. This add-on combined with the existing WSA, clearly offers outstanding opportunities for solitude given the overall abundance of secluded spots.

Summary: Does the area have outstanding opportunities for solitude?

(X) YES

() NO

Signature

Bruce Riffel

Date

11/18/87

B. Primitive and Unconfined Recreation

Narrative: Opportunities for primitive and unconfined recreation are the same as the rest of the Sleeping Giant WSA due to similarities in topography, vegetation, shoreline, and wildlife. Recreation uses include fishing, swimming, hunting, backpacking, day hiking, horse travel, nature study and photography. These diverse activities create outstanding opportunities for primitive forms of recreation.

Summary: Does the area have outstanding opportunities for primitive and unconfined types of recreation?

(X) YES

() NO

Signature

Bruce Riffel

Date

11/18/87

IV. SUPPLEMENTAL VALUES

Narrative: Scenic views of the Sleeping Giant formation, Holter Lake/Missouri River, the Beartooth Game Range and the Gates of the Mountains Wilderness Area from the unit are significant. In addition, populations of deer, elk, bighorn sheep, black bears, osprey, golden eagles, and bald eagles utilize the unit.

Summary: Does the area contain ecological, geological, or other features of scientific, educational, scenic, or historical value?

(X) YES

() NO

Signature Beady Riffel

Date 11/18/87

V. POSSIBILITY OF CERTAIN AREAS RETURNING TO A NATURAL CONDITION

Narrative: The telephone line which is no longer of service should be removed. Once this is done, the unit will appear totally natural.

Summary: If the area or island were to become a wilderness area, could the imprint of man's work be reduced by either natural processes or by hand labor to a level judged to be substantially unnoticeable?

(X) YES

() NO

Signature Beady Riffel

Date 11/18/87

FINAL DECISION ANALYSIS

VI. Summary of Public Comments

Twelve public comments specific to the Jackson Peak Add-on were received. Ten of these letters agreed with the proposed decision while two did not. Rationale cited for supporting the addition were the unit's high wilderness characteristics, proximity to Helena and Great Falls, added shoreline protection and increased opportunities for non-motorized recreation.

Those opposing further study expressed concerns about opposite shoreline development, boat and airplane traffic, and potential restrictions that wilderness would have on the Holter dam operation as well as flexibility in locating further transmission lines.

VII. Final Decision and Rationale

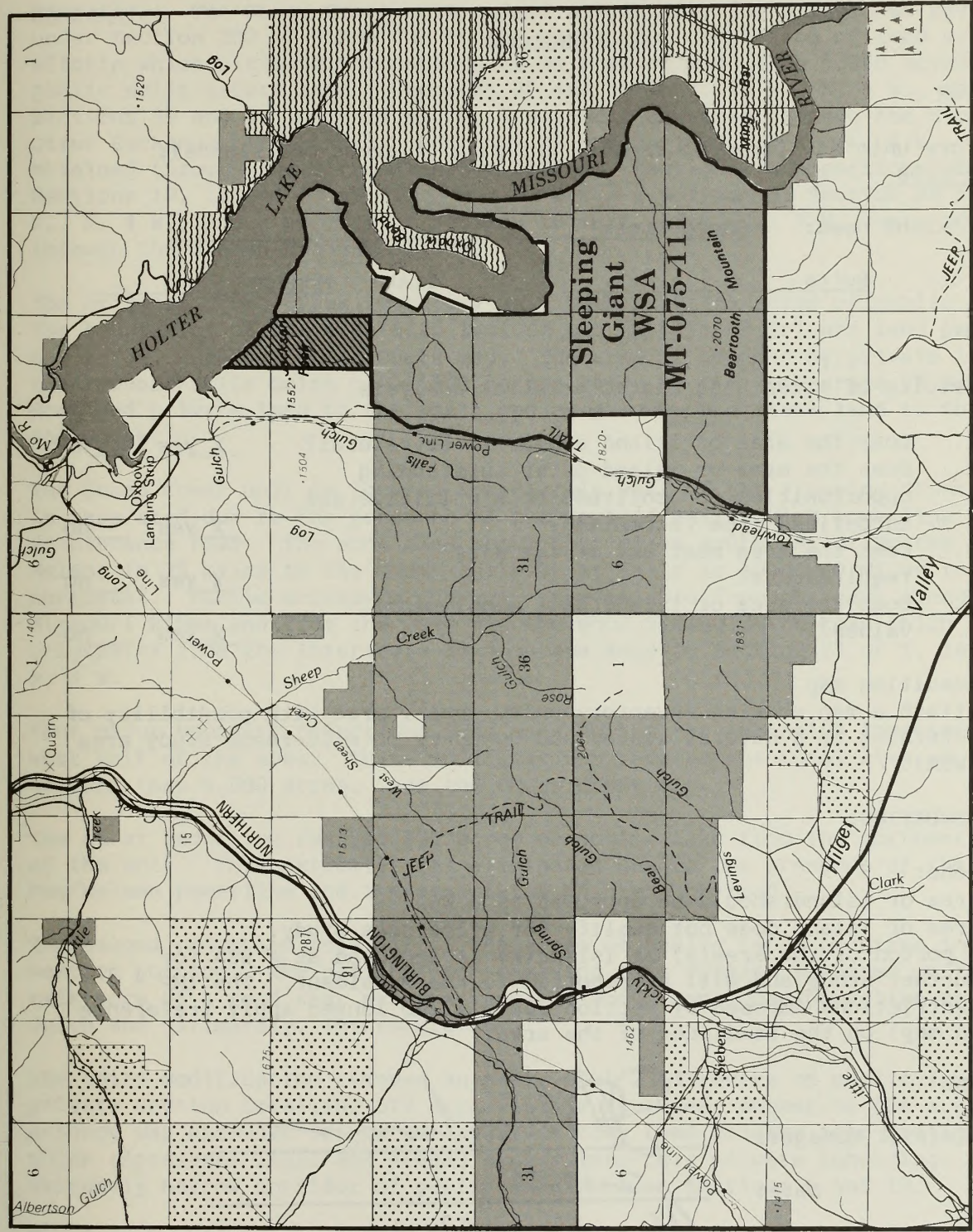
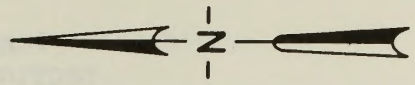
The unit will be included with the existing Sleeping Giant WSA and studied for wilderness potential. This area meets all the criteria found in Section 2c of the 1964 Wilderness Act and the BLM Wilderness Inventory Handbook. Consideration of resource concerns beyond the scope of this inventory process will be made during the study phase.

R. 4 W.

R. 3 W.

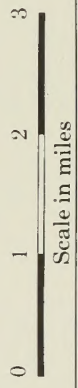
T. 14 N.

T. 13 N.



- BLM
- Private
- State

- State Game Range
- Forest Service
- Jackson Peak Inventory Unit



JACKSON PEAK ADD-ON MT-075-111A

A
SECTION 202
FEDERAL LAND POLICY AND
MANAGEMENT ACT OF 1976 (FLPMA)

WILDERNESS INVENTORY
WILDERNESS SUMMARY SHEET

FINAL DECISION

I. LOCATION

Inventory unit No. (area or island, grouping of areas or islands):
MT-075-111B

Areas/Island name: Sheep Creek

District: Butte State: Montana

II. SUMMARY:

A. Results of wilderness characteristics analysis.

- | | |
|--|---------------------------|
| 1. Does the area or island appear to be natural? | <u>X</u> yes <u> </u> no |
| 2. Does the area or island offer outstanding opportunities for solitude or a primitive and unconfined type recreation? | <u>X</u> yes <u> </u> no |
| 3. Does the area meet any of the size requirements? | <u>X</u> yes <u> </u> no |
| 4. Does the area or island have supplemental values? | <u>X</u> yes <u> </u> no |

B. Resulting map.

Attach a map showing inventory unit, roads, area with possibility of returning to a natural state, and boundary of wilderness study area (WSA).

III. RECOMMENDATION:

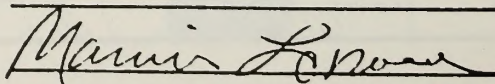
Check one:

- Area or island should be approved as a WSA.
- Area or island does not qualify for wilderness study.
- X A portion of the area(s) or island(s) is approved as a WSA for further study and will be reported to the President. The IMP restrictions imposed by Section 202 will no longer apply (reference to map) on the remainder of the area.

IV. APPROVAL

A. District Manager: 

Date: 2-10-88

B. State Director: 

Date: 2/26/88

Wilderness Intensive Inventory

Unit Number: MT-075 111B

Unit Name: Sheep Creek

I. SIZE

Narrative: The Sheep Creek unit gained eligibility for wilderness review under Section 202 of FLPMA due to the successful completion of land exchange efforts which ultimately consolidated an area of more than 5,000 acres of public split-estate land. Sections 25 and 36 in T. 14 N., R. 4 W., and Sections 29 and 31 in T. 14 N., R. 3 W., were acquired through the Sleeping Giant Exchange (1971-1981). Sections 27 and 35 in T. 14 N., R. 4 W., were obtained through the Wirth Exchange (1985). Section 3 and portions of Sections 10, 11 and 13 in T. 13 N., R. 4 W.; a portion of Section 34 in T. 14 N., R. 4 W.; and a portion of Section 18 in T. 13 N., R. 3 W., were acquired through the Sieben Exchange (1987).

The original Sheep Creek inventory unit totals 10,925 acres of public land. The boundaries of the area also include two parcels of private land totalling 617 acres. See the Sheep Creek map. The area is bounded by private land and the Towhead/Falls Gulch powerline on the east; by the Interstate 15 Frontage Road and private land to the west; and by private and state land to the north and south.

The Sheep Creek unit is located immediately west of the Sleeping Giant WSA and is separated due to the presence of the Towhead/Falls Gulch powerline and maintenance road. The area lies about four miles southwest of Holter Lake. Helena is 25 miles to the south while Great Falls is about 60 miles to the northeast. Public access to the unit is available from the east along the Missouri River and from the west via the Wood Siding Gulch Road which originates from the Interstate 15 Frontage Road in Section 33 of T. 14 N., R. 4 W.

Four major boundary reductions were made during the intensive inventory in the west half of the area. These modifications reduced the total size of the unit to less than 5,000 acres. See the Sheep Creek map.

The first reduction removed 495 acres of public land from the northwest corner of the unit. This extremity was eliminated due to the presence of the Holter Dam/Helena powerline and its associated maintenance road.

The second reduction totalling 2,666 acres of public land, occurred in the western portion. The rationale for removing this acreage is based on the existence of a road that extends from the above-mentioned powerline to Levings Gulch and ultimately, Interstate 15.

The third modification removed an additional 2,443 acres of public land and a private section totalling 577 acres in the southwest corner of the area. This acreage was excluded due to the presence of a road leading into Section 1 which represents legal and needed access into this private inholding; and the extremely narrow corridor of public land between Sections 6 and 12.

The fourth reduction totalling 1,354 acres of public land and a 40-acre private inholding occurred in the northcentral portion of the unit. This land was removed due to natural impacts (see Naturalness section) and an irregular land pattern with poorly identified topographic boundaries.

The net result of these boundary modifications reduce the total size of the Sheep Creek Inventory Unit to 3,967 acres of public surface land. See the Sheep Creek map and legend.

This 3,967 acre residual unit meets the size requirement due to strong public support received during the Intensive Inventory comment period and is of sufficient size to make practical its preservation and use as a wilderness area.

In order to ensure the continual preservation of the high scenic, wildlife and recreational values inherent to these lands, the BLM designated the area as an Area of Critical Environmental Concern (ACEC) in 1983.

The remaining narratives presented in this intensive inventory document with the exception of Naturalness, will only discuss the residual, 3,967-acre unit.

Summary: Does the area have at least 5,000 acres of contiguous land or meet one of the size exceptions specified on page 12 of the Wilderness Inventory Handbook?

(X) YES

() NO

Signature Brendley R. Ruff Date 5/8/88

II. NATURALNESS

Narrative: The Sheep Creek residual unit is characterized by steep, irregular topography ranging in elevation from 4,080 feet along Sheep Creek to 6,771 feet at the highest peak in Section 2. The core of the area is defined by the intersection of Rose Gulch and Sheep Creek drainages. Perennial streams and a vast array of riparian vegetation exist along the bottoms of these two drainages.

Approximately 50 percent of the unit is forested with stands of Douglas fir, Ponderosa, limber and lodgepole pine. The non-forested areas are comprised of rock ledges, talus slopes, forbes, and native grasslands consisting of bluebunch wheatgrass, Idaho fescue, etc.

The western portion of the original unit is heavily impacted with signs of past firefighting activity, timber cutting, contour terraces and an extensive grid of interconnecting trails and roads. A powerline also runs through the northwestern extremity of the area. Approximately 200 acres of contour terraces were constructed as a means of preparing the more productive sites for seedling establishment in response to the Sieben fire. Fire break lines created by bulldozer are readily apparent throughout Section 35. In addition, roads and trails traverse the entire west side of the area. The cumulative effects of these disturbances do significantly degrade the naturalness of this west portion and for this primary reason, these lands were removed from further review.

The 3,967-acre eastern portion to the contrary is very pristine and appears to be unaffected by past human activity. No significant impacts were noticed during the field inventory. Offsite influences include the powerline and associated maintenance road to the east. Distant sights of ranching activity and Interstate Highway 15 are noticeable but not obtrusive. Offsite impacts are minimal and do not significantly detract from the natural qualities of the remaining area.

Overall, the east portion of the unit is highly natural in character and do not exhibit noticeable signs of past human activity.

Summary: Does the residual area generally appear to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable?

(X) YES

() NO

Signature Brady Rife Date 11/18/87

III. OUTSTANDING OPPORTUNITIES FOR SOLITUDE OR PRIMITIVE AND UNCONFINED RECREATION

A. Solitude

Narrative: Despite its small size, the residual area does provide outstanding opportunities for solitude due to its scattered patches of forest vegetation and its irregular topography with dissecting drainages. These screening qualities enable visitors to easily avoid the sights and sound of others. The feeling of isolation is readily sensed within the densely, vegetated drainages of both Sheep Creek and Rose Gulch. Mixtures of open and timbered areas exist along the upper slopes allowing visitors the opportunity to both avoid one another as well as appreciate the spectacular distant views. These panoramic views of offsite mountain ranges and valleys enhance, rather than inhibit, a person's realization that he or she is alone. The immediate off-site intrusions described under Naturalness do not significantly degrade the area's opportunities for solitude.

Summary: Does the residual area have outstanding opportunities for solitude?

(X) YES

() NO

Signature Bradley Riffel Date 11/18/87

B. Primitive and Unconfined Recreation

Narrative: The area's irregular topography; varied vegetation, excellent wildlife diversity; and overall ability to disperse visitor use enable outstanding opportunities for primitive and unconfined recreation. Activities available range from winter snowshoe climbing to spring and summer hiking, backpacking, and horse travel to fall hunting for a variety of big game species. Wildlife observation, camping and nature photography comprise other recreation opportunities.

While none of these activities is considered to be of outstanding quality, the overall diversity of these recreational opportunities is outstanding.

Summary: Does the residual area have outstanding opportunities for a primitive and unconfined type of recreation?

(X) YES

() NO

Signature Bradley Riffel Date 11/18/87

IV. SUPPLEMENTAL VALUES

Narrative: Supplemental values consist of numerous scenic vistas and the diversity of wildlife populations including mule deer, elk, black bear, mountain goats and bighorn sheep.

Summary: Does the residual area contain ecological, geological, or other features of scientific, educational, scenic, or historical value?

(X) YES

() NO

Signature Bruce R. Rife Date 11/18/02

IV. POSSIBILITY OF CERTAIN AREAS RETURNING TO A NATURAL CONDITION

Narrative: There are no human impacts within the 3,967-acre unit which need to be returned to a natural condition.

Summary: If the area were to become a wilderness area, could the imprint of man's work be reduced by either natural processes or by hand labor to a level judged to be substantially unnoticeable?

(X) YES

() NO

Signature Bruce R. Rife Date 11/18/02

FINAL DECISION ANALYSIS

VI. Summary of Public Comments

Thirty-seven public comments addressed the Sheep Creek Unit. Of these, 34 disagreed with the proposed decision to remove the area from further study while only three were supportive.

The vast majority of the responses advocated that the Sheep Creek residual area (3,967 acres) be studied in conjunction with the Sleeping Giant WSA despite the presence of the MPC powerline and associated maintenance road. Many stated that they did not believe this dividing intrusion to be obtrusive or significantly noticeable within the area as a whole.

Rationale cited for recommending further study was that despite the area's small size, it is manageable, does compliment the Sleeping Giant WSA, and possesses outstanding wilderness characteristics as well as exceptional supplemental values. Other reasons for favoring study were the area's accessibility, proximity to Helena and Great Falls and that present management as an Area of Critical Environmental Concern does not ensure permanent protection.

Seven responses supported acquisition of the three Babcock sections (1, 5 and 7) to the south and further requested that these lands be included in the study. Other individual responses advocated acquisition of additional lands to the north, relocation of the powerline, and finally, modification of the NW boundary to include all public land in Sections 24 and 25.

Those opposing further study stated that the residual unit did not meet the size criteria, was already an ACEC, contained split-estate lands, and that there had been some off site mining in the Sheep Creek drainage. Additional concerns were expressed about potential restrictions to livestock grazing as well as the ability to maintain and improve the existing powerline and maintenance road.

VII. Final Decision and Rationale

The Sheep Creek residual area (3,967 acres) will be studied for wilderness suitability despite its size due to strong public support and its ability to be used and managed in an unimpaired condition. The area's split-estate ownership coupled with its mineral potential will be a critical issue during the study.

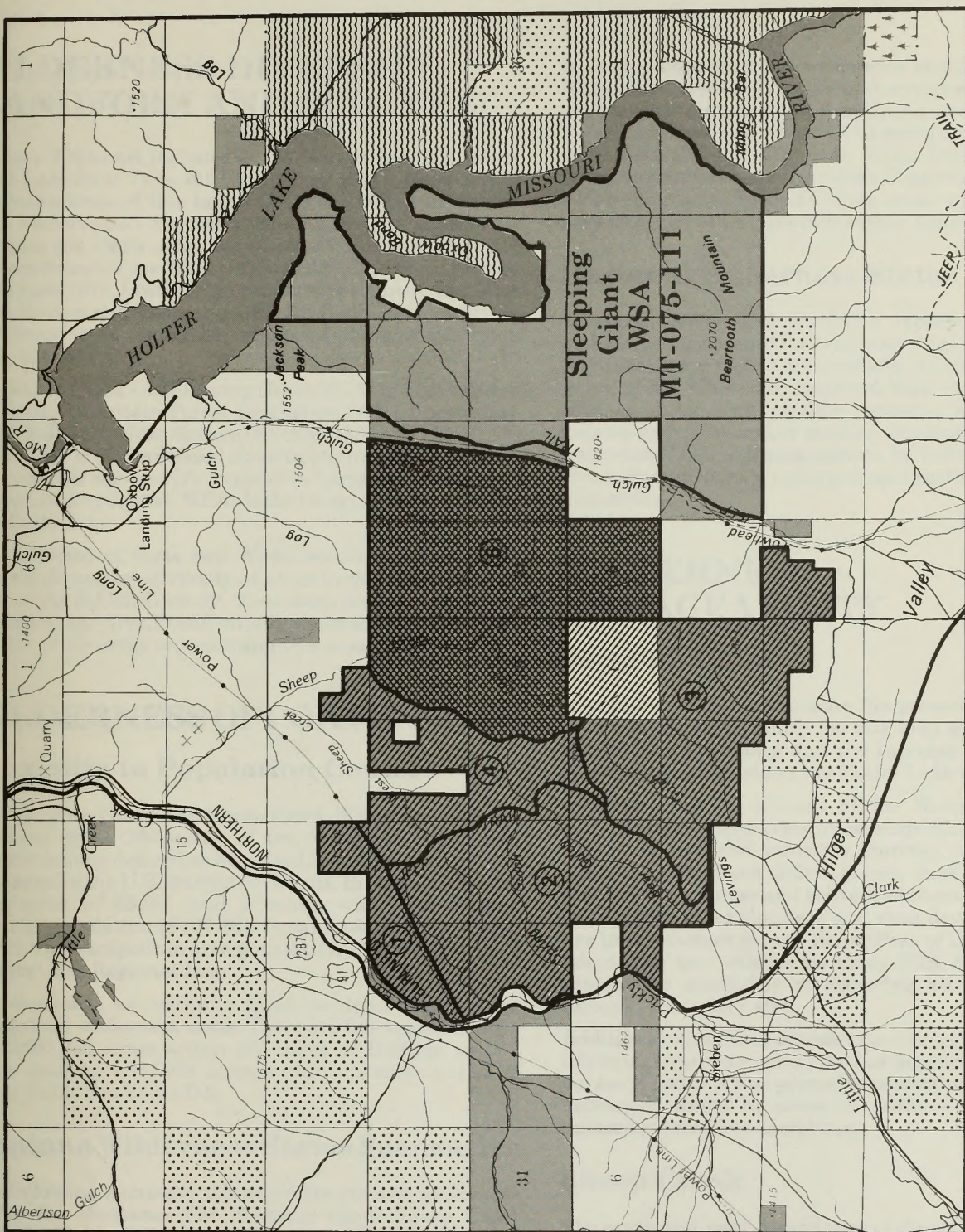
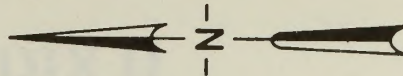
The remaining 6,958 acres will be dropped from further wilderness consideration due to its unnatural character and inability to provide outstanding opportunities to users.

R. 3 W

R. 4 W

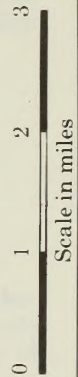
T. 14 N

T. 13 N



- | | | | |
|--|----------------------------|--|---------------------|
| | Sheep Creek Inventory Unit | | Residual Areas |
| | BLM | | State Game Range |
| | Private | | Forest Service |
| | State | | ①-④ Reduction Areas |

**SHEEP CREEK
MT-075-111B**



APPENDIX D

ADDITIONAL WILDERNESS FACTORS CONSIDERED

WILDERNESS DIVERSITY (LANDFORM AND ECOTYPE)

The two WSAs are included in the Northern Rocky Mountains Landform Type 401 (Hammond 1964). There are 17 representatives of this landform in the National Wilderness Preservation System totaling 6,962,644 acres. This includes the Gates-of-the-Mountains Wilderness that lies just southeast of the WSAs in this EIS. The Forest Service in its June 1978, Draft Environmental Statement, Roadless Area Review and Evaluation (RARE II) did not identify an additional need for further representations of this landform in the NWPS.

The Sheep Creek and Sleeping Giant WSAs are included in the Rocky Mountain Forest Ecosystem (M3110) according to the Bailey-Kuchler System (Kuchler 1964 and USDA, FS 1976). This is a broad based classification system that does not evaluate site specific vegetative types. The ecosystem represented by the two WSAs is the Douglas-fir forest (011). See Table D-1.

The addition of these two WSAs would not add to the general ecosystem diversity of areas in the NWPS. At the date of the RARE II study, there were seven existing wilderness areas, five Presidentially endorsed areas and 209 further study areas representing this ecosystem.

WILDERNESS OPPORTUNITIES

Proximity to Population Centers

The Sleeping Giant and Sheep Creek WSAs are within a five-hour drive (250 miles) of two industrial population concentrations defined as Standard Metropolitan Statistical Areas by the U.S. Bureau of Census. Billings has a 1980 population of 68,361 and a county-wide (Yellowstone County) population of 107,661. Great Falls has 56,568 people with a metropolitan area population of 80,639 (Cascade County). See Regional Map.

The two cities are within a five-hour drive of abundant designated wilderness areas. There are five areas containing 2,007,263 acres within 250 miles of Billings and 13 areas totaling 4,381,934 acres within the same radius of Great Falls. See Table D-2.

Montana Wilderness Status Summaries

The following summary tables list the current wilderness status for Montana. The Sleeping Giant/Sheep Creek Study is the last wilderness EIS to be prepared under Section 603 of FLPMA for the BLM in Montana.

Table D-3 lists the wilderness recommendations that will

be transmitted with this wilderness study. Table D-4 lists BLM wilderness study areas in Montana where the studies are complete and awaiting Presidential recommendations. Table D-5 lists the present Congressionally designated wilderness areas in Montana. Table D-6 lists wilderness recommendations pending before Congress for all agencies within Montana. Table D-7 lists areas still under wilderness study by other agencies within Montana.

Regional Wilderness Status Summary

Montana, Idaho and Wyoming represent the affected regions for purposes of this analysis since portions of these three states are within a reasonable driving distance (250 miles) of the WSAs. See Regional Map. Residents of these affected states have similar economic and social background and presumably similar demands for wilderness resources. Table D-8 summarizes by state the designated areas, Presidentially endorsed, and further study wilderness areas.

WILDERNESS MANAGEABILITY

Sleeping Giant

It would be difficult to ensure the preservation of wilderness values in perpetuity for this area given the private sub-surface ownership and the increasing popularity of motorized boating along the Holter Lake reservoir.

Approximately 40 percent of the Sleeping Giant sub-surface estate is in private ownership. Although the potential for energy and minerals (barring commercial slate deposits in Towhead Gulch) is low, there is no guarantee that the naturalness and solitude of these lands would not be degraded by exploration and even development activities in the distant future. Regardless of the final decision selected in this wilderness study/EIS, the BLM should explore the possibility of acquiring all private mineral rights in this study area.

Additional sights and sounds of motorized boats along the adjoining reservoir would further degrade the wilderness values of solitude and primitive recreation. The area most influenced would be along the eastern shoreline at the numerous primitive campsites.

Sheep Creek

The north and south boundaries of the study area are difficult to locate on the ground as they do not follow prominent topographic features such as ridges or creeks. These poorly identified boundaries would make user orientation and

inadvertent trespass a continuous problem especially along the ridgeline in T. 13 N., R. 4 W., Section 1.

Another manageability concern is the private ownership pattern of the sub-surface minerals despite the low potential for any foreseeable exploration or development. There

are no long-term guarantees that the current wilderness values of naturalness and solitude would not be degraded by some future energy or mineral related activity. Again, the BLM should explore the possibility of acquiring the mineral rights, regardless of the final decision.

TABLE D-1
ECOSYSTEM ACRES BY WSA

Ecosystem	Sleeping Giant Acres	Sheep Creek Acres
Douglas-fir Forest (011)	6,487	3,967

DOUGLAS-FIR FOREST (*Pseudotsuga*)

Physiognomy. Medium dense forest of medium tall needleleaf evergreen trees.

Dominants. Douglas-fir (*Pseudotsuga menziessi*).

Other Components. *Abies concolor*, *larix occidentalis*, *Physocarpus melvaceous*, *Picea pungens*, *P. glauca* (northern part), *Pinus contorta*, *P. ponderosa* (lower elevations), *Populus tremuloides*.

Occurrence. Northern Rocky Mountains and Washington state.

TABLE D-2
PROXIMITY OF WILDERNESS TO POPULATION CENTERS

Status	Population Center	Total Wilderness Acres Within a 5-Hour Travel Time	State	BLM		Other Agencies	
				Number of Areas	Acres	Number of Areas	Acres
Statutory Wilderness	Billings, MT	2,007,274	Montana	1	6,000	3	969,786
			Wyoming	—	—	2	1,037,483
	Great Falls, MT	4,387,934	Montana	1	6,000	2	3,292,917
			Idaho	—	—	1	1,089,017

TABLE D-3
WILDERNESS RECOMMENDATIONS TRANSMITTED BY THIS REPORT

BLM District	Resource Area	Report Name	Unit Name	Total Acreage	Acres Recommended Suitable	Acres Recommended Nonsuitable
Butte	Headwaters	Sleeping Giant & Sheep Creek Wilderness Environmental Impact Statement	Sleeping Giant	6,487	0	6,487
			Sheep Creek	3,967	0	3,967

TABLE D-4
COMPLETED MONTANA BLM WILDERNESS STUDIES
AWAITING PRESIDENTIAL RECOMMENDATIONS

District	Resource Area	Plan Name	Unit Name	Unit Number	Total Acreage	Preliminary Recommendations (State Director)
Butte	Headwaters	Humbug Spires ISA Suitability Report/EIS	Humbug Spires	—	11,175	8,791 ac. suitable 2,384 ac. nonsuitable
Butte	Headwaters	Headwaters RA Resource Management Plan/EIS	Blind Horse Creek	MT-075-102	4,927	4,927 ac. nonsuitable
Butte	Headwaters	Headwaters RA Resource Management Plan/EIS	Chute Mtn.	MT-075-105	3,205	3,205 ac. nonsuitable
Butte	Headwaters	Headwaters RA Resource Management Plan/EIS	Deep Cr./Battle Cr.	MT-075-106	3,086	3,086 ac. nonsuitable
Butte	Headwaters	Wilderness Planning Amendment/EIS for the Headwaters RA	Black Sage	MT-075-115	5,926	5,926 ac. nonsuitable
Butte	Headwaters	Wilderness Planning Amendment/EIS for the Headwaters RA	Yellowstone River Island	MT-075-133	53	53 ac. nonsuitable
Miles City	Billings	Billings RA Resource Management Plan/EIS	Twin Coulee	MT-067-212	6,870	6,870 ac. nonsuitable
Miles City	Billings	Billings RA Resource Management Plan/EIS	Pryor Mountain	MT-067-206	16,927	16,927 ac. suitable
Miles City	Billings	Billings RA Resource Management Plan/EIS	Burnt Timber Canyon	MT-067-205	3,955	3,430 ac. suitable 525 ac. nonsuitable
Miles City	Billings	Billings RA Resource Management Plan/EIS	Big Horn Tack-on	MT-067-207	4,550	2,550 ac. suitable 2,000 ac. nonsuitable
Butte	Dillon	Wilderness Planning Amendment/EIS for the Dillon RA	Ruby Mountains	MT-076-001	26,611	15,615 ac. suitable 10,996 ac. nonsuitable
Butte	Dillon	Wilderness Planning Amendment/EIS for the Dillon RA	Blacktail Mtns.	MT-076-002	17,479	10,986 ac. suitable 6,493 ac. nonsuitable
Butte	Dillon	Wilderness Planning Amendment/EIS for the Dillon RA	Farlin Creek	MT-076-034	1,139	610 ac. suitable 529 ac. nonsuitable
Butte	Dillon	Wilderness Planning Amendment/EIS for the Dillon RA	E. Fork Blacktail Deer Cr.	MT-076-007	6,180	6,180 ac. nonsuitable
Butte	Dillon	Wilderness Planning Amendment/EIS for the Dillon RA	Hidden Pasture Creek	MT-076-022	15,475	15,475 ac. nonsuitable
Butte	Dillon	Wilderness Planning Amendment/EIS for the Dillon RA	Bell Limekiln Canyons	MT-076-026	9,588	9,588 ac. nonsuitable
Butte	Dillon	Wilderness Planning Amendment/EIS for the Dillon RA	Henneberry Ridge	MT-076-028	9,756	9,756 ac. nonsuitable
Butte	Dillon	Wilderness Planning Amendment/EIS for the Dillon RA	Axolotl Lakes	MT-076-069	6,578	6,578 ac. nonsuitable

TABLE D-4 (continued)
COMPLETED MONTANA BLM WILDERNESS STUDIES
AWAITING PRESIDENTIAL RECOMMENDATIONS

District	Resource Area	Plan Name	Unit Name	Unit Number	Total Acreage	Preliminary Recommendations (State Director)
Lewistown	Phillips	Missouri Breaks Wilderness Suitability Study/EIS	Cow Creek	MT-066-256	34,050	21,590 ac. suitable 12,460 ac. nonsuitable
Lewistown	Phillips	Missouri Breaks Wilderness Suitability Study/EIS	Antelope Creek	MT-066-266	9,600	9,600 ac. suitable
Lewistown	Valley	Missouri Breaks Wilderness Suitability Study/EIS	Burnt Lodge	MT-065-278	13,730	13,730 ac. suitable
Miles City	Big Dry	Missouri Breaks Wilderness Suitability Study/EIS	Seven Blackfoot	MT-024-657	20,250	5,710 ac. suitable 14,540 ac. nonsuitable
Miles City	Powder River	Missouri Breaks Wilderness Suitability Study/EIS	Terry Badlands	MT-024-684	43,165	29,020 ac. suitable 14,145 ac. nonsuitable
Lewistown	Judith	Missouri Breaks Wilderness Suitability Study/EIS	Woodhawk	MT-068-246	8,100	8,100 ac. nonsuitable
Lewistown	Havre	Missouri Breaks Wilderness Suitability Study/EIS	Ervin Ridge	MT-066-253	10,200	10,200 ac. nonsuitable
Miles City	Big Dry	Missouri Breaks Wilderness Suitability Study/EIS	Bridge Coulee	MT-024-675	5,900	5,900 ac. nonsuitable
Miles City	Big Dry	Missouri Breaks Wilderness Suitability Study/EIS	Musselshell Breaks	MT-024-677	8,650	8,650 ac. nonsuitable
Lewistown	Valley	Bitter Creek Wilderness Suitability Study/EIS	Bitter Creek	MT-064-356	59,660	59,660 ac. nonsuitable
Miles City	Powder River	Powder River Resource Management Plan/EIS	Zook Creek	MT-027-701	8,438	8,438 ac. nonsuitable
Miles City	Powder River	Powder River Resource Management Plan/EIS	Buffalo Creek	MT-027-702	<u>5,650</u>	<u>5,650 ac. nonsuitable</u>
TOTAL BLM		NUMBER OF AREAS	30	380,875 ACRES	138,559 ACRES SUITABLE	

TABLE D-5
MONTANA STATUTORY WILDERNESS (ALL AGENCIES)

Agency	County(s)	Unit Name	Unit Number	Unit Acreage
BLM ¹	Madison	Bear Trap Canyon	—	6,000
	TOTAL BLM	NUMBER OF AREAS	1	6,000 ACRES
FS	Carbon, Stillwater, Sweet Grass, Park	Absaroka-Beartooth	NF 106	920,377
FS	Granite, Ravalli, Deer Lodge, Beaverhead	Anaconda-Pintlar	NF 003	157,874
FS	Flathead, Teton, Lewis & Clark, Powell	Bob Marshall	NF 005	1,009,356
FS	Lincoln, Sanders	Cabinets	NF 010	94,272
FS	Lewis & Clark	Gates of the Mtns.	NF 027	28,562
FS	Flathead Lake	Great Bear	NF 107	286,700
FS	Missoula	Mission Mtns.	NF 050	73,877
FS	Missoula	Rattlesnake	1-801	20,119
FS	Lewis & Clark, Powell	Scapegoat	NF 073	239,296
FS	Ravalli	Selway-Bitterroot	NF 074	248,893
FS	Granite	Welcome Creek	NF 103	28,135
FS ¹	Madison	Lee Metcalf	—	226,133
	TOTAL FS	NUMBER OF AREAS	12	3,333,594 ACRES
FWS	Beaverhead	Red Rock Lakes	WR-036	32,350
FWS	Sheridan	Medicine Lake National Wildlife Refuge	WR-027	11,800
FWS	Phillips	UL Bend National Wildlife Refuge	WR-047	20,847
	TOTAL FWS	NUMBER OF AREAS	3	64,997 ACRES
NPS	N/A	N/A	N/A	N/A
State Administered	N/A	N/A	N/A	N/A

¹The 6,000-acre BLM-managed Bear Trap Canyon is one component of the 259,000-acre Lee Metcalf Wilderness. The other units in the wilderness are managed by the Forest Service.

TABLE D-6
MONTANA WILDERNESS RECOMMENDATIONS PENDING
BEFORE CONGRESS (ALL AGENCIES)

Agency	County(s)	Unit Name	Unit Number	Unit Acreage
FWS	Garfield	East Seven Blackfoot	FW-923-1	12,184
FWS	Phillips	Mickey Butte	FW-923-2	17,413
FWS	Phillips, Valley	Burnt Lodge	FW-923-3	22,976
FWS	Garfield	Billy Creek	FW-923-4	11,556
FWS	Garfield	West Seven Blackfoot	FW-923-5	7,096
FWS	Phillips	Antelope Creek	FW-923-6	5,382
FWS	Garfield	West Mill Creek	FW-923-7	11,896
FWS	Petroleum	Fort Musselshell	FW-923-8	8,303
FWS	Garfield	Sheep Creek	FW-923-9	12,424
FWS	Phillips	West Beauchamp	FW-923-10	6,736
FWS	Garfield	Wagon Coulee	FW-923-11	10,528
FWS	Petroleum	Alkali Creek	FW-923-12	6,592
FWS	Petroleum	Crooked Creek	FW-923-13	6,842
FWS	Garfield	East Hell Creek	FW-923-14	15,984
FWS	Garfield	East Beauchamp	FW-923-15	5,568
	TOTAL FWS	NUMBER OF AREAS	15	161,480 ACRES
NPS	Flathead, Glacier	Glacier	NP-915	917,600
NPS	Park, Gallatin	Yellowstone	NP-928	167,060
	TOTAL NPS	NUMBER OF AREAS	2	1,084,660 ACRES

TABLE D-7
OTHER AGENCY AREAS IN MONTANA UNDER WILDERNESS STUDY OR WITH
PRELIMINARY RECOMMENDATIONS

Agency	County(s)	Unit Name	Unit Number	Net Unit Acreage	Acres Recommended
FS	Ravalli	Tolan Creek	X1070	7,088	—
FS	Ravalli	Sleeping Child	X1074	21,423	—
FS	Ravalli	Swift Creek	1065	744	—
FS	Ravalli	Needle Creek	1066	1,085	—
FS	Ravalli	Selway-Bitterroot	1067	109,711	48,305
FS	Ravalli, Granite	Stony Mtn.	1808	103,266	—
FS	Ravalli	Blue Joint	1941	65,370	28,500
FS	Ravalli	Allan Mtn.	1946	102,286	—
FS	Lake	Swan River Island	LIFAA	550	—
FS	Flathead	Benchmark	X1126	6,490	—
FS	Flathead	Coal Ridge	X1127	16,480	—
FS	Flathead	Deadhorse	X1128	23,550	—
FS	Flathead	Standard Peak	X1129	7,770	—
FS	Flathead	Mt. Hefty	1481	13,720	—
FS	Flathead, Lincoln	Tuchuck	1482	19,820	—
FS	Flathead, Lincoln	Mt. Thompson Seton	TS483	71,750	—
FS	Lake, Missoula	Mission Additions	1500-1506	2,340	—
FS	Flathead	Lebeau Creek	L1507	6,210	—

TABLE D-7 (continued)

OTHER AGENCY AREAS IN MONTANA UNDER WILDERNESS STUDY OR WITH
PRELIMINARY RECOMMENDATIONS

Agency	County(s)	Unit Name	Unit Number	Net Unit Acreage	Acres Recommended
FS	Flathead, Lake, Missoula, Powell, Lewis & Clark, Teton, Pondera, Glacier	Bear-Marshall-Scapegoat-Swan	1485	865,178	164,945
FS	Lincoln	Zulu Creek	X166	6,400	—
FS	Lincoln	Marston Face	X172	6,000	—
FS	Lincoln	Mt. Willard-Lake Estelle	1173	256	—
FS	Lincoln	Gold Hill (West)	X176	10,200	—
FS	Lincoln	Flagstaff Mt.	X690	9,500	—
FS	Lincoln	Roberts Mt.	X691	2,700	—
FS	Sanders	West Fork Elk Cr.	X692	819	—
FS	Sanders	Rock Creek	X693	400	—
FS	Lincoln	Buckhorn Ridge	1661	27,000	—
FS	Lincoln	Scotchman Peaks	1662	64,280	36,380
FS	Lincoln	Northwest Peaks	1663	19,100	—
FS	Sanders	Trout Creek	1664	31,400	—
FS	Sanders	Cataract	1665	27,600	—
FS	Lincoln	Grizzly Peak	1667	6,000	—
FS	Lincoln	Gold Hill	1668	10,700	—
FS	Sanders, Lincoln	Cabinet Face West	1670	10,900	8,000
FS	Sanders, Lincoln	Cabinet Face East	1671	50,400	20,500
FS	Sanders	Berray Mtn.	1672	8,300	—
FS	Sanders	Government Mtn.	1673	8,600	—
FS	Sanders	Lone Cliff Smeads	1674	6,600	—
FS	Sanders	McNeeley	1675	7,700	—
FS	Sanders	McKay Creek	1676	13,500	6,700
FS	Sanders	Galena	1677	15,500	—
FS	Sanders	East Fork Elk Cr.	1678	5,000	—
FS	Sanders	Chippewa Creek	1682	2,300	400
FS	Lincoln	Ten Lakes & Contiguous Areas	1683-1683A	41,100	31,800
FS	Lincoln	Roderick	1684	24,800	—
FS	Granite	Emerine	X1423	16,161	—
FS	Granite	Sapphires	1421	116,530	—
FS	Granite	Silver King	1424	65,767	—
FS	Granite	North Carp	1425	12,042	—
FS	Granite	Upper East Fork	1426	7,361	—
FS	Deer Lodge	Storm Lake	1427	7,481	5,918
FS	Granite, Powell	Flint Range-Dolus Lake	1428-1429	60,297	—
FS	Silver Bow	Basin Creek	1430	9,888	—
FS	Silver Bow, Madison	Highlands	1431	20,921	—
FS	Jefferson, Silver Bow	O'Neil Creek	1432	6,511	—
FS	Jefferson	Whitetail-Haystack	1433-1434	71,249	—
FS	Granite	Fred Burr	1435	6,643	—
FS	Sanders	McGregor-Thompson	LILAQ	27,850	—
FS	Missoula	Petty Mtn.	X1202	16,980	—
FS	Missoula	Deep Creek	X1814	7,970	—
FS	Missoula	Rattlesnake	X1204	2,700	—
FS	Missoula	Reservation Divide	X1205	16,300	—
FS	Sanders	Baldy Mtn.	X1209	6,680	—
FS	Granite, Missoula	Ward Eagle	X1220	8,570	—
FS	Sanders	Teepee-Spring Cr.	X1786	14,890	—
FS	Sanders	Evans Gulch	X1811	8,830	—
FS	Sanders	Clear Creek	X1812	5,470	—
FS	Sanders	Maple Peak	1141	7,860	—
FS	Mineral	Stevens Peak	1142	600	—
FS	Mineral	Wonderful Peak	1152	1,600	—
FS	Mineral, Missoula	Hoodoo	1301	98,500	81,500

TABLE D-7 (continued)

OTHER AGENCY AREAS IN MONTANA UNDER WILDERNESS STUDY OR WITH
PRELIMINARY RECOMMENDATIONS

Agency	County(s)	Unit Name	Unit Number	Net Unit Acreage	Acres Recommended
FS	Mineral	Meadow Cr-Upper N. Fork	1302	7,200	—
FS	Missoula	Marshall Peak	1781	9,400	—
FS	Sanders	Cube-Iron-Silcox	1784	38,100	—
FS	Sanders	Sundance Ridge	1785	7,220	—
FS	Sanders, Mineral	Mount Bushnell	1790	43,070	—
FS	Sanders, Mineral	Cherry Peak	1791	39,640	—
FS	Mineral	Gilt Edge-Silver Creek	1792	11,200	—
FS	Sanders	Patrick's Knob-N. Cutoff	1794	17,200	—
FS	Sanders	South Siegel-S. Cutoff	1795	14,800	—
FS	Sanders	North Siegel	1796	10,000	—
FS	Mineral	Marble Point	1798	13,170	—
FS	Mineral	Sheep Mtn.-St. Line	1799	40,500	—
FS	Missoula	Stark Mtn.	1800	14,140	—
FS	Missoula	Burdette	1803	16,380	—
FS	Missoula, Ravalli	Lolo Creek	1805	15,247	—
FS	Granite	Welcome Creek	1806	1,100	—
FS	Granite	Quigg	1807	81,985	60,830
FS	Missoula	Garden Point	1809	6,500	—
FS	Park, Sweetgrass, Stillwater	North Absaroka	1371	181,759	—
FS	Meagher, Park	Crazy Mtns.	1541	87,100	—
FS	Gallatin	Bridger Mtns.	1543	45,402	—
FS	Park	Republic Mtn.	1545	700	500
FS	Park	Chico Peak	1547	10,855	—
FS	Gallatin	Gallatin Divide-Hyalite	1548	158,109	—
FS	Gallatin	Dry Canyon	1550	2,160	—
FS	Park	Beartooth	1912	5,900	—
FS	Park	Reef	1914	2,200	—
FS	Park	Lionhead	1963	32,780	22,800
FS	Lewistown & Clark, Broadwater	Hedges Mtn. & Middleman Mtn.	X1613 & 1612	32,865	—
FS	Lewis & Clark, Broadwater	Hellgate Gulch	X1614	18,196	—
FS	Lewis & Clark, Broadwater, Meagher	Cayuse Mtn.	X1615	18,550	—
FS	Lewis & Clark, Powell	Lincoln Gulch	1601	8,125	—
FS	Lewis & Clark	Anaconda Hill	1602	17,461	—
FS	Lewis & Clark	Specimen Creek	1603	11,281	—
FS	Lewis & Clark	Crater Mtn.	1604	8,991	—
FS	Lewis & Clark, Powell	Ogden Mtn.	1605	12,140	—
FS	Lewis & Clark, Powell	Nevada Mtn.	1606	49,530	—
FS	Lewis & Clark, Powell	Jericho Mtn.	1607	8,968	—
FS	Lewis & Clark	Lazyman Gulch	1608	11,928	—
FS	Powell, Jefferson	Electric Peak	1609	46,497	—
FS	Lewis & Clark	Gates of the Mtns.	1610	11,717	9,974
FS	Lewis & Clark	Devils Tower	1611	7,018	—
FS	Broadwater, Meagher	Camas Creek	1616	28,286	—
FS	Broadwater, Meagher	Mount Baldy	1617	16,114	—
FS	Broadwater, Meagher	Grassy Mtn.	1618	6,444	—
FS	Meagher	Ellis Canyon	1619	8,636	—
FS	Broadwater, Meagher	Irish Gulch	1621	7,330	—
FS	Carbon	Lost Water Canyon	1362	9,800	9,800
FS	Carbon	Red Lodge Creek-Hellroaring	1363	14,760	—
FS	Carbon	Burnt Mtn.	1364	9,320	—
FS	Carbon, Stillwater	Fishtail-Saddleback Mtn.	1366	16,560	—
FS	Stillwater-Sweetgrass	West of Woodbine	1369	2,000	—
FS	Carbon	Black Butte	1368	880	—
FS	Powder River	Cook Mtn.	1370	11,700	—

TABLE D-7 (continued)

OTHER AGENCY AREAS IN MONTANA UNDER WILDERNESS STUDY OR WITH
PRELIMINARY RECOMMENDATIONS

Agency	County(s)	Unit Name	Unit Number	Net Unit Acreage	Acres Recommended
FS	Rosebud	King Mtn.	1372	11,700	—
FS	Carbon	Line Cr. Plateau	1911	20,680	—
FS	Carbon	Rock Creek	1913	200	—
FS	Lewis & Clark	Sawtooth	1721	15,500	—
FS	Cascade, Meagher	Tenderfoot-Deep Creek	1726	88,400	—
FS	Cascade	Pilgrim Creek	1727	49,500	—
FS	Cascade, Judith Basin	Paine Gulch	1728	8,500	—
FS	Cascade	Sawmill Creek	1729	12,800	—
FS	Judith Basin	TW Mtn.	1730	8,500	—
FS	Judith Basin, Cascade	Big Baldy	1731	44,000	—
FS	Judith Basin	Granite Mtn.	1732	10,580	—
FS	Judith Basin	Tollgate-Sheep	1733	26,800	—
FS	Judith Basin	Mount High	1735	32,300	—
FS	Choteau, Cascade, Judith Basin	Highwood-Baldy	1737	15,600	—
FS	Choteau, Judith Basin	Highwoods	1738	24,100	—
FS	Meagher, Wheatland	Bluff Mtn.	1740	37,120	—
FS	Meagher	Spring Creek	1741	19,800	—
FS	Meagher	Box Canyon	1742	11,647	—
FS	Meagher	Castle Mtns.	1743	29,600	—
FS	Meagher	North Fork of Smith	1744	8,800	—
FS	Meagher	Calf Creek	1745	11,020	—
FS	Meagher	Eagle Park	1746	6,300	—
FS	Beaverhead	Beaver Lake	X1003	13,474	—
FS	Beaverhead	Saginaw Creek	X1004	8,493	—
FS	Beaverhead	Tash Peak	X1005	62,119	—
FS	Beaverhead	West Pioneers	X1006	90,750	—
FS	Beaverhead	Call Mtn.	X1009	10,179	—
FS	Beaverhead	Cattle Gulch Ridge	X1010	18,891	—
FS	Beaverhead	Fleecer	X1011	36,873	—
FS	Deer Lodge, Beaverhead	Granulated Mtn.	X1012	16,266	—
FS	Beaverhead	Bear Creek	X1015	8,252	—
FS	Beaverhead	Mckenzie Canyon	X1016	33,652	—
FS	Beaverhead	Sourdough Peak	X1017	14,838	—
FS	Beaverhead	Timber Butte	X1018	5,018	—
FS	Beaverhead	Dixon Mtn.	X1019	3,982	—
FS	Beaverhead	Four Eyes Canyon	X1020	6,856	—
FS	Madison	Sheep Mtn.	X1021	32,115	—
FS	Madison	Crockett Lakes	X1022	6,830	—
FS	Madison	Cherry Lakes	X1023	12,940	—
FS	Madison	Vigilante	X1024	16,458	—
FS	Madison, Beaverhead	Snowcrest Mtn.	X1025	97,630	—
FS	Madison	Black Butte	X1026	39,787	—
FS	Madison	Big Horn Mtn.	X1027	50,390	—
FS	Madison	Lone Butte	X1028	14,138	—
FS	Madison, Beaverhead	Freezeout Mtn.	X1029	95,098	—
FS	Beaverhead	Anderson Mtn.	X1942	48,451	—
FS	Beaverhead	Goat Mtn.	X1944	9,454	—
FS	Deer Lodge, Beaverhead	North Big Hole	1001	56,779	6,571
FS	Beaverhead	East Pioneer	1008	144,558	80,273
FS	Madison	Middle Mtn.-Tobacco			
		Roots	1013	93,327	—
FS	Madison	Potosi	1014	5,465	—
FS	Beaverhead	West Big Hole	1943	130,660	55,014

TABLE D-7 (continued)

OTHER AGENCY AREAS IN MONTANA UNDER WILDERNESS STUDY OR WITH
PRELIMINARY RECOMMENDATIONS

FS	Beaverhead	Italian Peak	1945	90,917	12,907
FS	Beaverhead	Garfield Mtn.	1961	42,777	—
FS	Beaverhead	Mt. Jefferson	1962	<u>4,474</u>	<u>—</u>
TOTAL FS		NUMBER OF AREAS	180	5,611,789 ACRES	691,617 ACRES
NPS	Big Horn	Big Horn Canyon	—	7,645	—
TOTAL NPS		NUMBER OF AREAS	1	7,645 ACRES	—

"X" before the unit number indicates a new roadless area that was identified through the forest planning process, not through RARE II.

TABLE D-8
REGIONAL WILDERNESS OPPORTUNITIES

State	Agency	Designated Wilderness Areas		Agency	Presidentially Endorsed Areas		Agency	Further Study Planning Areas	
		Number of Areas	Acres		Number of Areas	Acres		Number of Areas	Acres
Montana	FS	12	3,360,342	NPS	2	1,084,660	BLM	35	438,801
	FWS	3	64,997						
	BLM	1	6,000						
	Total	16	3,431,339						
				FWS	15	161,480	NPS	1	7,645
	Total	16	3,431,339						
				Total	17	1,246,140	Total	36	446,645
	Total	16	3,431,339						
Idaho	FS	5	3,825,069	NPS	1	69,880	BLM	58	1,534,116
	NPS	1	42,243						
	Total	6	3,867,312						
				Total	1	69,880	Total	58	1,534,116
	Total	6	3,867,312						
Wyoming	FS	6	2,193,220	BLM	35	542,046	BLM	35	542,046
	NPS	2	1,848,744						
	Total	6	2,193,220						
				Total	2	1,848,744	Total	35	542,046
	Total	6	2,193,220						

FS — Forest Service

BLM — Bureau of Land Management

FWS — Fish and Wildlife Service

NPS — National Park Service

GLOSSARY

(Including Acronyms and Abbreviations)

ALLOTMENT. An area designated for the use of a prescribed number of sheep or cattle.

AUM. Animal Unit Month. A standardized unit of measurement of the amount of forage necessary for the complete subsistence of an animal unit (one cow or one horse or five sheep, all over six months old) for one month; also, a unit of measurement of grazing privilege which represents the privilege of grazing one animal for a period of one month.

BAILEY-KUCHLER SYSTEM. A land classification system which divides the United States into various ecosystems based upon an integration of the natural factors of climate, vegetation, soils, and landform.

BLM. Bureau of Land Management.

CULTURAL RESOURCE. Evidence of human behavior.

ECOSYSTEM. Collectively, all populations in a community, plus the associated environmental factor.

EIS. Environmental Impact Statement.

ENDANGERED SPECIES. Plant or animal species identified by the Secretary of the Interior as endangered in accordance with the 1973 Endangered Species Act.

ENVIRONMENTAL IMPACT STATEMENT (EIS). A detailed written report for a proposal on which a significant impact or land allocation is anticipated.

FORAGE. Refers specifically to all browse and non-woody plants that are available to livestock or game animals and used for grazing or harvested for feeding.

FORBS. Foot; a broadleaf herb other than grass. See forage also.

FLPMA. Federal Land Policy and Management Act of 1976.

FS. Forest Service.

FWS. Fish and Wildlife Service, a division of the U.S. Department of Interior.

HABITAT TYPE. An aggregation of all land areas potentially capable of producing similar plant communities at climax.

IMPACT. The effect, influence, alteration or imprint of an activity.

INTERMITTENT CREEKS. Drainages where stream-flow occurs during wet weather, usually fifty percent of the year.

INHOLDING. A parcel of nonpublic land surrounded by public land.

ISSUE. A subject or question of widespread public interest identified through public participation.

LEASABLE MINERALS. Those minerals or materials subject to lease by the federal government. Includes oil and gas, coal, phosphate, sodium, potash, and oil shale.

LOCATABLE MINERALS. Minerals or materials subject to disposal and development through the Mining Law of 1872 (as amended). Generally includes metals such as gold and silver and other materials not subject to lease or sale (some bentonites, limestones, talc, some zeolites, etc.).

MDFWP. Montana Department of Fish, Wildlife and Parks.

MITIGATE. The lessen the severity.

MULTIPLE USE. The management of all the various resources so that they are utilized in the combination that will best meet the needs of the American people.

NATURALNESS. Refers to an area that "generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable" (from Section 2 (c), Wilderness Act).

NWPS. National Wilderness Preservation System.

OFF ROAD VEHICLE. Any vehicle capable of being operated off an established road or trail; e.g. motorbikes, four-wheeled drive vehicles and snowmobiles.

ORV. Off road vehicle.

OUTSTANDING. Unusual among others of its kind; conspicuous; prominent. Superior to others of its kind, distinguished, excellent.

PATENTED CLAIM. A claim on which title has passed from the federal government to the mining claimant under the 1872 mining law.

PERENNIAL CREEKS. Drainages where water flow persists ninety percent of the year in well-defined channels.

PLANNING CRITERIA. The factors used to guide development or revision of the resource management plan to ensure that it is tailored to the issue previously identified and to ensure that necessary data collection and analysis are avoided. Planning criteria are developed to guide the collection and use of inventory data and information, the analysis of the management situation, the design and formulation of alternatives, the estimation of the effects of alternatives, the evaluation of alternatives, and the selection of the preferred alternative.

POLICY. A guiding principle which is based on a specific decision or set of decisions.

PRIMITIVE AND UNCONFINED RECREATION. Nonmotorized and nondeveloped types of outdoor recreational activities.

PUBLIC LANDS. Lands administered by the Bureau of Land Management.

PUBLIC PARTICIPATION ACTIVITIES. Meetings, conferences, seminars, workshops, tours, written comments, response to survey questionnaires, and similar activities designed and held to obtain comments from the general public and specific publics.

RARE II. Roadless Area Review and Evaluation II.

RECREATION (Developed). That type of recreation that occurs where modifications (improvements) enhance recreation opportunities and accommodate intensive recreation activities in a defined area.

RECREATION (Dispersed). That type of recreation use that requires few, if any, improvements and may occur over a wide area. This type of recreation involves activities related to roads and trails. The activities do not necessarily take place on or adjacent to a road or trail, only in conjunction.

RECREATION VISITOR DAY. One visitor day equals 12 hours (one person for 12 hours, or 12 people for 1 hour, or any combination thereof).

RIPARIAN. Land areas which are directly influenced by water. They usually have visible vegetative or physical characteristics showing this water influence. Streambanks, lake borders, or marshes are typical riparian areas.

RMP. Resource Management Plan. The Bureau's basic land use plan after 1979.

ROAD. Vehicle routes that have been improved and maintained by mechanical means to ensure relatively regular and continuous use.

SOLITUDE. The state of being alone or remote from habitations; isolation. A lonely, unfrequented or secluded place.

SMSA. Standard Metropolitan Statistical Area. A county that contains at least one city of 50,000 inhabitants plus any adjacent urban territory.

SUITABILITY. As used in the Wilderness Act and in the Federal Land Policy and Management Act, refers to a recommendation by the Secretary of the Interior or the Secretary of Agriculture that certain federal lands satisfy the definition of wilderness in the Wilderness Act and have been found appropriate for designation as wilderness on the basis of an analysis of the existing and potential uses of the land.

THREATENED AND ENDANGERED SPECIES. A species or subspecies of animals or plants whose prospects of survival and reproduction are in immediate jeopardy, or likely to become so within the foreseeable future. Threatened species are identified by the Secretary of Interior in accordance with the 1973 Endangered Species Act.

USDI. United States Department of Interior.

VISITOR DAY. The use of an area for a total of 12 person hours by one or more people, either continuously or over several visits.

VISUAL RESOURCE. The composite of basic terrain, geologic features, water features, vegetative patterns, and land use effects that typify a land unit and influence the visual appeal the unit may have for visitors.

WATER QUALITY STANDARDS. Quantitative or qualitative criteria for chemical, physical and biological characteristics that are established for the purpose of providing water that is suitable for specific uses.

WATERSHED. A drainage basin feeding a stream, river, or lake.

WILDERNESS. Under the 1964 Wilderness Act, wilderness is undeveloped federal land retaining its primeval character and influence without permanent improvements or human habitation. It is protected and managed so as to preserve its natural conditions which generally appear to have been affected by the forces of nature with the imprints of human activity substantially unnoticeable; has outstanding opportunities for solitude or a primitive recreation; has at least 5,000 acres or is of sufficient size to make practical its preservation, enjoyment, and use in an unimpaired condition; and may contain features of scientific, educational, scenic, or historical value as well as ecologic interest.

WILDERNESS INVENTORY. An evaluation of the public lands in the form of a written description and map showing those lands that meet the wilderness criteria as established under Section 603(a) of FLPMA and Section 2(c) of the Wilderness Act, which will be referred to as wilderness study areas (WSAs).

WILDERNESS MANAGEMENT. The management of human use and influence on lands that have been designated by Act of Congress as wilderness areas.

WILDERNESS MANAGEMENT POLICY. A policy document presenting the general objectives, policies, and specific activity guidance applicable to all designated BLM wildernesses. Specific management objectives, requirements, and decisions implementing administrative practices and visitor activities in individual wildernesses are developed and described in the wilderness management plan for each unit.

WSA. Wilderness Study Area. A parcel of public land that through the BLM's wilderness inventory process has been found to possess the basic wilderness characteristics of being at least 5,000 acres in size, being primarily natural, and having outstanding opportunities for solitude or primitive and unconfined recreation.

WILDERNESS SUITABILITY RECOMMENDATIONS. A recommendation by the Bureau of Land Management, the Secretary of the Interior, or the President, with respect to an area's suitability or unsuitability for preservation as wilderness.

WILDERNESS REPORTING. The process of preparing the reports containing wilderness recommendations on wilderness study areas and transmitting those reports to the Secretary of the Interior, the President, and Congress.

WILDERNESS REVIEW. The term used to cover the entire wilderness inventory, study, and reporting process of the wilderness program of the Bureau of Land Management.

WILDERNESS VALUES. The wilderness characteristics and multiple resource benefits of an area.

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